

=> FILE WPIX

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=> D QUE

L3 1 SEA FILE=REGISTRY ABB=ON 9003-07-0
L4 1 SEA FILE=REGISTRY ABB=ON 7429-90-5
L6 19437 SEA FILE=HCAPLUS ABB=ON (L4 OR AL OR ALUMINUM OR ALUMINIUM) (4A)
PARTICLE?
L15 1962922 SEA FILE=HCAPLUS ABB=ON L3 OR PP OR POLYPROPYLENE OR POLYMER#
OR COPOLYMER#
L16 2110 SEA FILE=HCAPLUS ABB=ON L6 AND L15
L17 10 SEA FILE=HCAPLUS ABB=ON L16 AND SIZE(3A) (305 OR 310 OR 315 OR
320 OR 325 OR 330 OR 335 OR 340 OR 345 OR 350 OR 355 OR 360 OR
365 OR 370 OR 375 OR 380 OR 390 OR 395 OR 400)
L18 0 SEA FILE=HCAPLUS ABB=ON L16 AND SIZE(3A) (205 OR 215 OR 225 OR
235 OR 245 OR 255 OR 265 OR 275 OR 285 OR 295)
L19 35 SEA FILE=HCAPLUS ABB=ON L16 AND SIZE(3A) (200 OR 210 OR 220 OR
230 OR 240 OR 250 OR 260 OR 270 OR 280 OR 290 OR 300)
L31 79 SEA FILE=WPIX ABB=ON (L17 OR L18 OR L19)
L32 11 SEA FILE=WPIX ABB=ON L31 AND C08K?/IC

=> D L32 1-11 FULL

L32 ANSWER 1 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN
AN 2005-733073 [75] WPIX
DNC C2005-223629 [75]

TI Polymer blend for use in producing plastic articles having metallic effect for e.g. engine compartment of automobile, comprises metal particles component comprised of aluminum particles, talc, and olefinic thermoplastic polymer

DC A17; A32; A97

IN ALI M L; BAL J J; BARNUM D E; DORSKY S; JAGGERS J D; VOLD Y D

PA (FECO-C) FERRO CORP

CYC 1

PI US 20050228100 A1 20051013 (200575)* EN 4[0]

C08K003-08

ADT US 20050228100 A1 US 2004-823381 20040413

PRAI US 2004-823381 20040413

IC ICM C08K003-08

ICS C08K003-34

AB US 20050228100 A1 UPAB: 20060125

NOVELTY - A polymer blend for use in producing plastic articles having a metallic effect appearance for high temperature applications, comprises (weight%): metal particles component (3-12), talc (30-60), and olefinic thermoplastic polymer (35-70). The metal particle component comprises aluminum particles having an undefined configuration and an average particle size of 200-400 microns.

USE - The blend is used in producing plastic articles having a metallic effect appearance for high temperature applications (claimed), e.g. engine compartment of automobile or truck, or inside of appliance such as dishwasher or clothes washing machine. The articles include bottles, closures, automotive parts, toys, furniture, and cabinet parts.

ADVANTAGE - The finished parts have good dispersion and distribution of the metal particles, and display a significant metallic look or effect that is noticeable in even low light conditions (e.g., in office or within a house). There are no knit lines and flow lines upon molding of the polymer blend.

TECH INORGANIC CHEMISTRY - Preferred Components: The talc has an average particle size of 1-5 microns.

ORGANIC CHEMISTRY - Preferred Components: The talc has an average particle size of 1-5 microns.

POLYMERS - Preferred Compositions: The olefinic thermoplastic polymer comprises a homopolymer or copolymer of polypropylene. The blend comprises talc (40-55), olefinic polymer (40-65), metal particles component (5-11), and colorant (5).

ABEX EXAMPLE - Polymer blend comprised of talc filled polypropylene (89.80), aluminum particles (6.80) having average particle size of 225 microns, aluminum particles (2.95) having average particle size of 330 microns and undefined configuration and additives (0.45), was prepared. The resulting product had a tensile strength of 2905 psi, elongation at yield of 6.2%, flexural strength of 5008 psi, and izod impact of 0.81 ft-lb/inch.

FS CPI

MC CPI: A08-R06B

L32 ANSWER 2 OF 11 WPIX COPYRIGHT 2007

THE THOMSON CORP on STN

AN 2005-487166 [49] WPIX

CR 2006-512316

DNC C2005-148585 [49]

TI Coating composition for cars and floor coverings, e.g. ceramic tiles and wood flooring, comprises film-forming resin and particles dispersed in resin

DC A82; G02

IN SCHNEIDER J R

PA (PITT-C) PPG IND OHIO INC; (SCHN-I) SCHNEIDER J R
CYC 107

PI US 20050137291 A1 20050623 (200549)* EN 10[0]
WO 2005059045 A2 20050630 (200549) EN
EP 1699886 A2 20060913 (200660) EN
AU 2004299860 A1 20050630 (200680) EN
MX 2006006825 A1 20060901 (200706) ES C08K003-00

ADT US 20050137291 A1 US 2003-738511 20031217; AU 2004299860 A1 AU 2004-299860
20041215; EP 1699886 A2 EP 2004-818025 20041215; WO 2005059045 A2 WO
2004-US42015 20041215; EP 1699886 A2 WO 2004-US42015 20041215; MX
2006006825 A1 WO 2004-US42015 20041215; MX 2006006825 A1 MX 2006-6825
20060615

FDT EP 1699886 A2 Based on WO 2005059045 A; AU 2004299860 A1 Based on
WO 2005059045 A; MX 2006006825 A1 Based on WO 2005059045 A

PRAI US 2003-738511 20031217

IC ICM C08K003-00

ICS C09D005-00; C09D007-00

IPCI C08K0003-00 [I,A]; C08K0003-00 [I,C]; C08K0003-00 [I,A]; C09D0005-00
[I,C]; C09D0005-00 [I,A]; C09D0007-00 [I,A]; C09D0007-00 [I,C];
C09D0007-00 [I,A]

IPCR C08K0003-00 [I,A]; C08K0003-00 [I,C]; C09D0005-00 [I,A]; C09D0005-00
[I,C]; C09D0005-08 [I,A]; C09D0005-08 [I,C]; C09D0007-00 [I,A];
C09D0007-00 [I,C]; C09D0007-12 [I,A]; C09D0007-12 [I,C]

AB US 20050137291 A1 UPAB: 20051223

NOVELTY - A coating composition comprises a film-forming resin, and particles having a particle size of 5-1000 nm dispersed in the resin. The weight ratio of particles to resin is 0.2-2.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a substrate coated directly with the coating composition containing a weight ratio of carbon black pigment to film-forming resin of greater than or equal to 0.04, and a weight ratio of particles to film-forming resin of greater than or equal to 0.2, the cured coating deposited from the coating composition having a 20 degrees gloss of greater than or equal to 75 units and greater than or equal to 10% greater corrosion resistance after 250 hours salt spray exposure as compared to a similar coating with no particles; and

(2) a method for improving the corrosion resistance of a substrate comprising applying to a portion of the substrate the coating.

USE - For cars and floor coverings, e.g. ceramic tiles and wood flooring.

ADVANTAGE - The coating composition has improved resistance without adversely affecting the appearance of the coatings.

TECH INORGANIC CHEMISTRY - Preferred Material: The particles are inorganic. The inorganic particles are silica, aluminum silicate, borosilicate glass, nitrides, oxides, quartz, nepheline syenite, zircon, buddeluyte, or eudialyte. Preferred Property: The particles have a particle size of 5-700 nm, and a surface area of 5-150 m²/g. Preferred Mixture: The mixture comprises 10-50 wt.% of particles having a particle size of 5-400 nm and 50-90 wt.% of particles having a particle size of 400-1000 nm.

ORGANIC CHEMISTRY - Preferred Material: The particles are inorganic. The inorganic particles are silica, aluminum silicate, borosilicate glass, nitrides, oxides, quartz, nepheline syenite, zircon, buddeluyte, or eudialyte. Preferred Property: The particles have a particle size of 5-700 nm, and a surface area of 5-150 m²/g. Preferred Mixture: The mixture comprises 10-50 wt.% of particles having a particle size of 5-400 nm and 50-90 wt.% of particles having a particle size of 400-1000 nm.

POLYMERS - Preferred Material: The polymer is acrylic polymers, polyester polymers, polyurethane

polymers, or polyether polymers. The polymer comprises reactive functional groups comprising epoxy groups, carboxylic acid groups, hydroxyl groups, isocyanate groups, amide groups, carbamate groups, and/or carboxylate groups.

ABEX EXAMPLE - A liquid coating composition was prepared by blending a resin pack comprising (grams) Joncryl 500 (20.58), polyester resin (13.9), Tinuvin 292 (1.03), Tinuvin 328 (1.54), dibutyl tin dilaurate (0.1), n-butyl acetate (53.75), Byk 300 (0.03), Vansil W-10 (4.51), Shieldex AC-5 (4.52), and Toner F3547 (25.35); and a crosslinker pack comprising (grams) Tolonate HDTLV (20.08), Luxate IT1073 (20.28), Silquest A-187 (3.28), and DT870 (42.42).

FS: CPI

MC CPI: A12-R03; A12-T05; G02-A01; G02-A02B2; G02-A02C; G02-A02E; G02-A02H

L32 ANSWER 3 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 2005-477708 [48] WPIX

DNC C2005-145531 [48]

TI Composition useful for coating a substrate comprises a film-forming resin, and imidazole compound

DC A82; E13; G02

IN SCHNEIDER J R

PA (PITT-C) PPG IND OHIO INC; (SCHN-I) SCHNEIDER J R

CYC 106

PI US 20050137298 A1 20050623 (200548)* EN 11[0] C08K005-34

WO 2005059043 A1 20050630 (200548) EN C09D005-08

ADT US 20050137298 A1 US 2003-738656 20031217; WO 2005059043 A1 WO

2004-US42012 20041215

PRAI US 2003-738656 20031217

IC ICM C08K005-34; C09D005-08

ICS C09D167-00

AB US 20050137298 A1 UPAB: 20051223

NOVELTY - A coating composition comprises a film-forming resin (a1); and an imidazole compound (b1). The weight ratio of (b1) to (a1) is 0.5 - 10.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a substrate coated directly with (c1) in which (c1) either contains (ia) a weight ratio of carbon black pigment to (a1) of at least 0.04, and a weight ratio of (b1) to (a1) of at least 0.5; or (iia) a weight ratio of (b1) to (a1) of at least 0.5, and a weight ratio of particles to (b1) of at least 0.2. In case of (ia), the cured coating deposited from (c1) having at least 10 % greater adhesion and at least 10 % greater corrosion resistance after 250 hours salt spray exposure as compared to a similar coating with no imidazole compound. In case of (iia), the cured coating deposited from (c1) having a 20 degree gloss of at least 75 units and at least 10 % greater corrosion resistance after 250 hours salt spray exposure as compared to a similar coating with no imidazole compound and with no particles.

USE - For coating a substrate (e.g. metallic substrate selected from aluminum, galvanized steel or untreated steel) (claimed).

ADVANTAGE - The coating composition imparts greater adhesion and greater corrosion resistance of a cured coating deposited from the coating composition compared to a cured coating deposited from a similar coating composition with no imidazole compound of (b1); improves the corrosion resistance of the substrate when applied; and can apply directly to a metallic substrate as topcoats which eliminates the need for an additional primer layer in the painting process.

TECH **POLYMERS** - Preferred Coating: The cured coating is at least 0.5 (preferably 0.5 - 5) mils thick. In (c1), the resultant cured coating, when deposited directly on galvanized steel substrate has at least 10 % greater adhesion and at least 10 % greater corrosion resistance as compared to a similar coating with no imidazole compound. (c1)

Additionally comprises several of particles having a particle size of 5 - 1000 nanometers dispersed in the resin, the weight ratio of particles to (a1) is 0.2 - 2. In case (iia), the resultant cured coating from the coating composition, when deposited directly on untreated steel substrate has a 20 degree gloss of at least 75 units and at least 10 % greater corrosion resistance after 250 hours salt spray exposure as compared to a similar coating with no imidazole compound and with no particles. The corrosion resistance is at least 50 percent greater.

Preferred Components: (a1) Comprises at least one reactive functional group containing polymer and at least one curing agent having functional groups reactive with the functional group of the

polymer. The polymer is acrylic polymer, polyester polymer, polyurethane polymer or polyether polymer. The polymer comprises reactive functional groups selected from epoxy, carboxylic acid, hydroxyl, isocyanate, amide, carbamate and/or carboxylate groups.

INORGANIC CHEMISTRY - Preferred Components: The particles are inorganic particles selected from silica, aluminum silicate, borosilicate glass, nitrides, oxides, quartz, nepheline syenite, zircon, buddeluyite or eudialyte. The particles have a particle size of 5 - 700 nanometers; and have a surface area of 5 - 150 m²/g.. The several of particles is a mixture of particles of different sizes. The mixture comprises particles (10 - 50 wt.%) having a particle size of 5 - 400 nanometers and particles (50 - 90 wt.%) having a particle size of 400 - 1000 nanometers. The particles are spherical, non-uniform in morphology and plate-like.

ABEX SPECIFIC COMPOUNDS - 2-Mercaptotoluimidazole, zinc 2-mercaptotoluimidazole, 2-mercaptobenzimidazole, 2-amino benzimidazole, 5-methyl benzimidazole, and 2-mercapto-5-methylbenzimidazole are specifically claimed as the imidazole compound.

EXAMPLE - A coating composition (test) was prepared as follows: Mixing 2-mercaptobenzimidazole (1.79) with polyester resin (formed from isostearic acid, 1,4-cyclohexanedicarboxylic acid and trimethylol propane (at a ratio of 39.2/23.8/37 wt.) at 93 % solids in methyl n-amyl ketone and xylene in a wt. ratio of 56.8/43.2) (14.29), Chisorb 328 (TM) (acrylic resin) (1.42), Tinuvin 292 (TM) (liquid hindered amine light stabilizer) (0.93), and n-butyl acetate (13.17). This mixture was milled in a 4 ounce sealed jar containing zircon grind media for 2 hours on a high speed shaker. After this, additional ingredients of Joncryl 500 (TM) (polyester resin) (18.90), Ircogel 906 (TM) (rheology control additive) (1.87), and dibutyl tin dilaurate (18.90) were added to the mixture and milled on a high speed shaker for an additional 10 minutes. After milling was complete, the material was removed from the sealed jar and filtered to remove the grind media. Toner F3547 (TM) (delfleet evolution carbon black tinter) (49.34) was then added to the milled mix. This mixture was named the resin pack. The crosslinker pack was prepared by mixing Tolonate HDTLV (TM) (hexamethylene diisocyanate trimer) (19.29), Luxate IT1073 (TM) (polyisocyanate) (19.47), Silquest A-187 (TM) (silane) (6.61) and DT870 (TM) (solvent blend). The resin pack was co-blended with the crosslinker pack to obtain test composition, just prior to substrate application via handspray using a DeVilbiss GTI HVLP spray gun with a 1.4 tip. A comparative coating composition was prepared same as test, except using imidazole compound (i.e. 2-mercaptobenzimidazole). Both test/comparative coating composition was spray applied directly to APR18661 E60 EZG 60G test panels. Both the coated substrate was allowed to cure at ambient conditions for 7 days prior to testing. After ambient cure, test/comparative coated substrates were tested for dry film thickness and adhesion, and found to be 1.99/1.87 mils, complete adhesion/no adhesion of the cured coating surface to the substrate surface, respectively.

FS CPI

MC CPI: A08-C03; A08-D04; A08-E02; A12-B04; E05-L03D; E06-D05; G02-A05E

L32 ANSWER 4 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 2004-593457 [57] WPIX

DNC C2004-215876 [57]

TI Surface modification of inorganic oxide powders, useful on the surface of e.g. building material, machinery, vehicle or glass product, involves modifying the surfaces of the oxide powders by high-temperature flame

DC A60; D21; E37; G01; G02; L02; L03; P73

IN KOGOI H; KOGOI H; TANAKA; TANAKA A; TANAKA J

PA (SHOWA-C) SHOWA DENKO KK; (KOGO-I) KOGOI H; (TANA-I) TANAKA J

CYC 107

PI WO 2004065495 A2 20040805 (200457)* EN 44 [0] C09C003-06

JP 2004262674 A 20040924 (200463) JA 18 C01B013-14

EP 1587883 A2 20051026 (200570) EN

US 20060127669 A1 20060615 (200640) EN

ADT WO 2004065495 A2 WO 2004-JP616 20040123; JP 2004262674 A JP 2003-16402

20030124; EP 1587883 A2 EP 2004-704755 20040123; EP 1587883 A2 WO

2004-JP616 20040123; US 20060127669 A1 Provisional US 2003-443529P

20030130; US 20060127669 A1 WO 2004-JP616 20040123; US 20060127669 A1 US

2005-543099 20050722

FDT EP 1587883 A2 Based on WO 2004065495 A

PRAI US 2003-443529P 20030130

JP 2003-16402 20030124

IC ICM C01B013-14; C09C003-06

ICS C01F007-02; C01G023-00; C08K003-00; C08L101-00; C09C001-40

IPCI B32B0005-16 [I,A]; C09K0011-77 [I,A]

AB WO 2004065495 A2 UPAB: 20060122

NOVELTY - A surface modification method involves modifying the surfaces of large-size particles of an inorganic oxide powder A and small-size particles of an inorganic oxide powder B by a high-temperature flame formed by use of a combustible gas and a combustion-supporting gas.

DETAILED DESCRIPTION - A surface modification method involves bringing an inorganic oxide powder A and an inorganic oxide powder B into a high-temperature flame formed by use of a combustible gas and a combustion-supporting gas to modify the surfaces of particles of the powder A by means of particles of the powder B. The inorganic oxide powder A has an average particle size of 0.5 - 200 microns as measured by laser diffraction/scattering particle size analysis device. The inorganic oxide powder B has a particle size of at most 100 nm calculated on the basis of its BET specific surface area.

INDEPENDENT CLAIMS are also included for the following:

(1) a powder obtained through the surface modification method, having an average particle size of 0.5-250 microns as measured by means of laser diffraction/scattering particle size analysis;

(2) an organic polymer composition comprising an organic polymer and the powder (0.01-90 mass%) on the basis of the entire mass of the composition;

(3) a silicon-containing polymer composition comprising a silicon-containing polymer and the powder (0.01-90 mass%);

(4) a molded product formed through molding of the organic polymer composition or silicon-containing polymer composition;

(5) a slurry, a coating agent, a coating material, a luminescent material or a cosmetic composition comprising the powder;

(6) a coating agent comprising the powder; and

(7) a structure comprising, on its surface, the powder.

USE - The surface-modified powder is useful in a slurry, a coating agent, a coating material, a luminescent material or a cosmetic composition and a structure (e.g. building material, machinery, vehicle,

glass product, electric appliance, agricultural material, electronic apparatus, tool, tableware, bath product, toiletry product, furniture, clothing, cloth products, fiber, leather product, paper product, sporting good, futon, container, eyeglass, signboard, piping, wiring, bracket, sanitary material, automobile part, outdoor good, stocking, sock, glove, or masks) and in molded products (claimed) e.g. fiber, film and plastic molded products e.g. heat-storing fiber, heat-generating fiber, UV-shielding fiber, UV-shielding film, high thermally conductive material, high thermally conductive sheet or film and insulating material, film and sheet. Also in as a filler or a modifier for resin products or as an additive to paper, paint and printing ink. As raw materials in ceramic products and electronic parts.

ADVANTAGE - The powders exhibit excellent fillability, viscosity characteristics and fluidity. The method enables production of the powder as filler for use in a highly viscous composition (e.g. an organic polymer composition or a silicon-containing polymer composition) at low cost and enhances the characteristics of the composition, such as thermal conductivity, flame retardancy and insulating property. The inorganic powder must exhibit high fluidity. The surface-modified powder exhibits the effect of sufficiently lowering the viscosity of the resultant composition, as compared with powder, which has not undergone such surface modification. Thus even when the amount of the surface-modified powder in the composition is increased, molding of the composition can be readily performed.

TECH INORGANIC CHEMISTRY - Preferred Method: In the method, the resultant powder is brought again into the high-temperature flame to modify the surfaces of particles of powder A. The high-temperature flame is formed by a coaxial triple-tube burner having an innermost tube, an intermediate tube and an outermost tube, in which the powder or powders are passed through the innermost tube, a combustible gas is passed through the intermediate tube and a combustion-supporting gas is passed through the outermost tube. Powder A and powder B are sprayed into the flame together, optionally with a carrier gas.

Preferred Components: The powder A comprises particles of an oxide of aluminum (Al), magnesium (Mg), calcium (Ca), titanium (Ti) or silicon (Si), or particles of a mixed crystal of the oxides. The powder B comprises particles of an oxide of Al, Ti or Si, or particles of a mixed crystal of the oxides. The powder A comprises particles having a spherical degree of at least 0.7 as defined by the formula:

spherical degree = (the circumference of a circle having the same area as that of a projection image of a particle) ÷ (the length of the contour of the projection image of the particle).

The BET-based particle size of powder B is at most 1/10 the average particle size of powder A as measured by laser diffraction/scattering particle size analysis. The amount of powder A is 50-99 mass% on the basis of the total mass of powder A and powder B. The powder comprises particles having spherical degree of at least 0.7 and has undergone surface treatment by use of an agent for imparting hydrophobicity to the surface of the powder.

POLYMERS - Preferred Polymer: The organic polymer is at least one resin selected from a synthetic thermoplastic resin, a synthetic thermosetting resin or a natural resin. The organic polymer composition or silicon-containing polymer composition are in the form of a compound, or a masterbatch.

ORGANIC CHEMISTRY - Preferred Gas: The combustible gas is methane, ethane, propane, ethylene, propylene, acetylene, butane, liquid petroleum gas (LPG), hydrogen and/or carbon monoxide.

Preferred Composition: The cosmetic composition further comprises an oil, a whitening agent, a humectant, an anti-aging agent, an emollient, an

extract, an anti-inflammatory agent, an antioxidant, a surfactant, a chelating agent, an antibacterial agent, a preservative, an amino acid, a sugar, an organic acid, an alcohol, an ester, fat and oil, a hydrocarbon, an anti-UV agent, or an inorganic powder.

ABEX EXAMPLE - Gaseous aluminum chloride which had been diluted with nitrogen (concentration of aluminum chloride: 26%) was preliminarily heated to 1000 degrees C. A gas mixture of oxygen (35 vol.%) and steam (65 vol.%) was preliminarily heated to 1000 degrees C. The aluminum chloride gas and the gas mixture were brought into a reaction tube through a coaxial parallel-flow nozzle at flow rates of 61 m/second and 55 m/second, respectively. The aluminum chloride gas was fed through the inner tube. After completion of reaction, cooling air was brought into the reaction tube such that the high-temperature residence time of the resultant mixture was at most 0.1 seconds in the reaction tube. The alumina powder was then collected by use of a polytetrafluoroethylene-made bag filter and had a BET-based particle size of 15 nm and contained a gamma-alumina crystal phase. The aluminum oxide powder was employed as powder B. The round-shaped alumina powder had an average particle size of 22 microns as measured by use of a laser particle size analyzer and was employed as powder A. Subsequently, liquid petroleum gas (LPG) was spurted out from the nozzle of the middle tube of a coaxial triple-tube burner at a flow rate of 45 m/second, and oxygen was spurted out from the nozzle of the outermost tube of the burner at a flow rate of 73 m/second, to form a combustion flame. The powder A and the powder B were mixed together such that the ratio by mass of the powder A to the powder B was 9:1, and then the resultant mixture was fed into a raw material hopper. The powder mixture was fed through the innermost tube at a feed rate of 4 kg/hour together with air serving as a carrier gas, and spurted out from the nozzle of the tube to the combustion flame. The flow rate of the air spurted out from the nozzle was 20 m/second, and the tube Reynolds number of the air was 6,000. The combusted gas containing the solid was subjected to solid-gas separation in a cyclone, and the resultant powder was collected. The surface-modified powder had a white color and a spherical shape. The powder was subjected to particle size analysis by use of a laser diffraction/scattering particle size analyzer and the average particle size of the powder was found to be 25 microns. - The powder (250 g) and AER-250 (RTM; an epoxy resin) (100 g) were kneaded for five minutes and then subjected to defoaming for one minute. After its temperature was adjusted to 25 degrees C, the viscosity of the product was measured, which was 730 cP. - For a comparison, the powder A and powder B were vibration-mixed together in a resin bag such that the ratio by mass of the powder A to the powder B was 9:1. The resultant powder mixture (250 g) and the epoxy resin were kneaded for five minutes and then subjected to defoaming for 1 minute. After the temperature of the resultant product was adjusted to 25 degrees C, the viscosity of the product was at least 5000 cP.

FS CPI; GMPI

MC CPI: A08-R01; D08-B10; E31-P01; E34-B01; E34-C01; E34-D01; E35-K01;
G01-A01; G01-A06; G01-A08; G01-A10; G01-B01; L02-A02; L02-D14F;
L03-A; L03-G06; L03-J; L04-X

L32 ANSWER 5 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 2004-282856 [26] WPIX

DNC C2004-108683 [26]

TI Polymer composition for making melt fabricated, extruded or injection molded article, particularly cookware e.g. pans, sheets, trays, dishes or casseroles, comprises liquid crystalline polymer and metal particles

DC A23; A60; A84; P28; Q74

IN BUSHELMAN C; CROWE C

PA (SOLV-C) SOLVAY ADVANCED POLYMERS LLC

CYC 101

PI WO 2004022669 A1 20040318 (200426)* EN 34 [3]

AU 2003263007 A1 20040329 (200459) EN

EP 1537189 A1 20050608 (200537) EN

BR 2003013974 A 20050519 (200549) PT

JP 2005537379 W 20051208 (200580) JA 22 C08L067-03

US 20060014876 A1 20060119 (200607) EN

CN 1694941 A 20051109 (200618) ZH

KR 2005059162 A 20050617 (200641) KO

ADT WO 2004022669 A1 WO 2003-US27250 20030903; US 20060014876 A1 Provisional
 US 2002-407309P 20020903; AU 2003263007 A1 AU 2003-263007 20030903; BR
 2003013974 A BR 2003-13974 20030903; CN 1694941 A CN 2003-824982 20030903;
 EP 1537189 A1 EP 2003-794543 20030903; EP 1537189 A1 WO 2003-US27250
 20030903; BR 2003013974 A WO 2003-US27250 20030903; JP 2005537379 W WO
 2003-US27250 20030903; US 20060014876 A1 WO 2003-US27250 20030903; JP
 2005537379 W JP 2004-534389 20030903; US 20060014876 A1 US 2005-526231
 20050729; KR 2005059162 A WO 2003-US27250 20030903; KR 2005059162 A KR
 2005-703415 20050228

FDT AU 2003263007 A1 Based on WO 2004022669 A; EP 1537189 A1 Based on
 WO 2004022669 A; BR 2003013974 A Based on WO 2004022669 A; JP
 2005537379 W Based on WO 2004022669 A; KR 2005059162 A Based on WO
 2004022669 A

PRAI US 2002-407309P 20020903

US 2005-526231 20050729

IC ICM C08L067-03; C09K019-02

ICS A47J027-00; A47J036-02; C08K003-08; C09K019-38; F24C015-14;

F24C007-02

IPCI C08K0003-00 [I,C]; C08K0003-08 [I,A]

IPCR C09K0019-38 [I,A]; C09K0019-38 [I,C]; C09K0019-52 [I,A]; C09K0019-52 [I,C]

AB WO 2004022669 A1 UPAB: 20060203

NOVELTY - A **polymer** composition comprises a liquid crystalline
polymer and metal particles having an average particle size of 420
 mum. At least 90 weight% of the metal particles have a particle size
 of greater than 200 mum.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(a) a melt fabricated article made from the **polymer**
 composition;

(b) an extruded article made from the **polymer**
 composition;

(c) an injection molded article made from the **polymer**
 composition;

(d) a cookware made from **polymer** compositions and
 selected from pans, sheets, trays, dishes, or casseroles; and

(e) method of increasing the thermal conductivity of an article
 formed from a **polymer** composition comprising compounding metal
 particles having a particle size with a liquid crystalline **polymer**
 and forming the article from the **polymer** composition.

USE - For making melt fabricated, extruded or injection molded
 article, particularly cookware such as cooking pans, sheets (10), trays,
 dishes, or casseroles (claimed).

ADVANTAGE - The composition has sufficient thermal conductivity to
 provide browning and crisping of foods during cooking. It is
 cost-effective and capable of withstanding typical baking temperature.

DESCRIPTION OF DRAWINGS - The figure illustrates a view of a baking
 sheet.

Cooking sheets (10)

TECH **POLYMERS** - Preferred Composition: The **polymer**
 composition comprises 20-70 wt.% of the metal particles based on the total
 weight of the **polymer** composition. Preferred Component: The

composition further comprises colorant, reinforcing filler, mineral filler, antioxidant, thermal stabilizer, ultraviolet light stabilizer, plasticizer, lubricant, or mold release agent. The filler is a non-thermally conductive filler from synthetic polymeric fibers, or rock wool fibers. The polymer composition consists of liquid crystalline polymer, one type of metal particle, and optionally, non-thermally conductive fillers. Preferred Material: The liquid crystalline polymer is a polyester that is at least partially aromatic. The polyester is formed from the reaction product of at least one dicarboxylic acid from terephthalic acid, isophthalic acid, 2,6-naphthalic dicarboxylic acid, 3,6-naphthalic dicarboxylic acid, 1,5-naphthalic dicarboxylic acid, or 2,5-naphthalic dicarboxylic acid; and at least one diol from hydroquinone, resorcinol, 4,4'-biphenol, 3,3'-biphenol, 2,4'-biphenol, 2,3'-biphenol, and 3,4'-biphenol. The polyester is further formed from at least one hydroxycarboxylic acid from p-hydroxybenzoic acid, m-hydroxybenzoic acid, 2,6-hydroxynaphthalic acid, 3,6-hydroxynaphthalic acid, 1,6-hydroxynaphthalic acid, and/or 2,5-hydroxynaphthalic acid.

METALLURGY - Preferred Material: The metal particle is aluminum, brass, copper, magnesium, nickel, stainless steel, steel, silver, tin, or zinc particles. The aluminum particle is an aluminum flake. Preferred Parameter: The particle size of at least 90 wt.% of the metal particles is greater than 400 mum. The average particle size is greater than 500 mum. The aluminum flake has an average length of 0.25-10 (preferably 1) mm, an average width of 0.25-10 mm (preferably 1), and an average thickness of 5-250 (preferably 25) mum.

CERAMICS AND GLASS - Preferred Material: The non-thermally conductive filler is glass fibers.

INORGANIC CHEMISTRY - Preferred Material: The non-thermally conductive filler can be talc, metal oxide fibers, silicate fibers, or silicon carbide fibers.

FS CPI; GMPI

MC CPI: A08-M09C; A09-A01A; A09-A02A; A12-D03

L32 ANSWER 6 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 2002-698742 [75] WPIX

DNC C2002-197935 [75]

TI Material for coating turbine blades and vanes, comprises pre-selected silicon alkyd paint loaded with preset amount of finely divided aluminum and/or aluminum alloy particles

DC A82; G02; M13; P42; P73

IN LIBURDI J; LOWDEN P; MORAVEK V

PA (LIBU-N) LIBURDI ENG LTD; (LIBU-I) LIBURDI J; (LOWD-I) LOWDEN P; (MORA-I) MORAVEK V

CYC 98

PI WO 2002070617 A1 20020912 (200275)* EN 18[0] C09D183-10

US 20020128376 A1 20020912 (200275) EN B05D003-02

AU 2002242519 A1 20020919 (200433) EN

US 6805906 B2 20041019 (200469) EN B05D003-02

US 20040224158 A1 20041111 (200475)# EN B32B009-00

ADT WO 2002070617 A1 WO 2002-CA330 20020308; US 20020128376 A1 Provisional US 2001-273953P 20010308; US 6805906 B2 Provisional US 2001-273953P 20010308; AU 2002242519 A1 AU 2002-242519 20020308; US 20020128376 A1 US 2002-92802 20020308; US 6805906 B2 US 2002-92802 20020308; US 20040224158 A1 Div Ex US 2002-92802 20020308; US 20040224158 A1 US 2004-866782 20040615

FDT AU 2002242519 A1 Based on WO 2002070617 A

PRAI US 2001-273953P 20010308

US 2002-92802 20020308

US 2004-866782 20040615

IC ICM C09D183-10

ICS C08K003-02; C08K003-10; C09D005-00

IPCR C08K0003-00 [I,C]; C08K0003-08 [I,A]; C09D0183-10 [I,A]; C09D0183-10 [I,C]; C23C0010-00 [I,C]; C23C0010-02 [I,A]; C23C0010-30 [I,A]; C23C0010-52 [I,A]

AB WO 2002070617 A1 UPAB: 20050527

NOVELTY - Coating material, for coating a superalloy substrate, comprises a pre-selected silicon alkyd paint loaded with a predetermined amount of finely divided aluminum and/or aluminum alloy particles.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a process for coating a turbine component which is subjected to high temperature operation during its life, comprising cleaning the component, and then coating with a slurry containing finely divided aluminum and/or aluminum alloy particles and a carrier of a commercially available silicone alkyd paint.

USE - For coating superalloy substrates such as turbine blades (claimed) and vanes.

ADVANTAGE - The working life of metallic turbine components that are subjected to high temperature operation in hostile environment is drastically extended by the presence of protective coating formed on and diffused into superalloy. The method is simple and coating is applied at room temperature and atmospheric pressure without the use of complicated cementation, heat pack processes or vapor deposition processes. The coating has enhanced oxidation-, corrosion-, and erosion-resistance, and resistance to cracking, peeling and spalling. The coating technique is inexpensive and even an unskilled labor is able to perform the steps required to obtain the coated portion. Control of the coating process is straight forward and easy to maintain. The paint has excellent leveling properties and cures so that when the cured coating is heated to diffuse the aluminum particulate material into the substrate, no bubbling or cracking of the coating occurs. The coating equipment is not of exotic nature as found in conventional schemes.

TECH POLYMERS - Preferred Paint: The coating material preferably comprises a Benjamin-Moore M66-79 silicone alkyd high heat aluminum paint. INORGANIC CHEMISTRY - Preferred Composition: The coating material further comprises 0-15 wt.% of other elemental particles to improve the oxidation resistance of coating. The finely divided aluminum alloy particles have a size of about -350 mesh. The mass ratio of the paint to particles is 1:1.

Preferred Coating Process: The turbine component coated with slurry is air cured and heat treated to partially form a diffused coating in the presence of an inert gas at 840 degreesC. The partially heated component is heat treated in vacuum furnace for a preset time to diffuse-bond the coating to the turbine component at 1080 degreesC. Subsequently, the component is air cooled.

ABEX EXAMPLE - Amdry 355 (RTM: silicon-aluminum powder) (50 parts by weight, (pbw)) with size of preferably -350 mesh was mixed with M66-79 (RTM: silicone alkyd high heat aluminum paint) (50 pbw) as carrier. The mixture was repeatedly evacuated to -10 psig for several seconds to remove entrapped air. The mixing of paint and powder was continued for 30-50 minutes, until no air bubbles or agglomerates were present in the mixture. The slurry was filtered to a 0.5 mm mesh screen. - A partially coated turbine blade was dipped in a coating mixture to wet the surface of the portion to be coated. Subsequently, excess slurry was allowed to drip from the coated portion and the coated portion was air cooled for 1 hour at room temperature. The coated article was then placed in a furnace whose pressure is dropped to less 1 mm mercury and was maintained at same pressure for half an hour. The furnace was filled with argon at room temperature and pressure and heated to 840 degreesC at the

rate of 20 degreesC/min., with simultaneous flow of argon gas through the furnace. The temperature was maintained constant for half an hour. The coated article was cooled to 100 degreesC and placed in high temperature vacuum furnace. The coated component was heated to 1080 degreesC at the rate of 10 degreesC/minute and held at same temperature for half an hour for air quenching. A superalloy component having a protective silicon containing aluminide coating diffused on the surface was produced. The coating had enhanced oxidation-, corrosion-, and erosion-resistance and resistance to cracking, peeling and spalling.

FS CPI; GMPI

MC CPI: A10-E05B; A12-B01C; A12-B01H; A12-W12G; G02-A05E; M13-D; M13-M

L32 ANSWER 7 OF 11 WPIX COPYRIGHT 2007

THE THOMSON CORP on STN

AN 1995-163366 [22] WPIX

DNC C1995-075594 [22]

TI Ceramic materials - comprising ceramic particles and emulsion polymer(s) comprising (meth)acrylate ester monomer(s), vinyl(idene) aromatic monomer(s), acid-containing monomers and comonomers

DC A14; A81; J04; L02

IN WHITMAN D W; WU X

PA (ROHM-C) ROHM & HAAS CO; (WHIT-I) WHITMAN D W

CYC 8

PI EP 650946 A1 19950503 (199522) * EN 12[0] C04B035-634

BR 9404249 A 19950606 (199529) PT C04B035-00

CA 2134394 A 19950502 (199531) EN C04B035-00

JP 07188504 A 19950725 (199538) JA 10[0] C08L033-08

ZA 9408586 A 19950830 (199541) EN 21[0] C04B000-00

EP 650946 B1 19991124 (199954) EN C04B035-634

DE 69421786 E 19991230 (200007) DE C04B035-634

MX 200965 B 20010307 (200226) ES C04B038-02

ADT EP 650946 A1 EP 1994-308007 19941031; BR 9404249 A BR 1994-4249 19941026;

CA 2134394 A CA 1994-2134394 19941026; MX 200965 B MX 1994-8310 19941027;

DE 69421786 E DE 1994-69421786 19941031; EP 650946 B1 EP 1994-308007

19941031; DE 69421786 E EP 1994-308007 19941031; JP 07188504 A JP

1994-290332 19941101; ZA 9408586 A ZA 1994-8586 19941101

FDT DE 69421786 E Based on EP 650946 A

PRAI US 1993-146343 19931101

IC ICM C04B035-634; C04B038-02

IPCR C04B0035-63 [I,C]; C04B0035-632 [I,A]; C04B0035-634 [I,A]; C08K0003-00

[I,A]; C08K0003-00 [I,C]; C08L0025-00 [I,C]; C08L0025-04 [I,A];

C08L0033-00 [I,A]; C08L0033-00 [I,C]; C08L0033-04 [I,A]; C08L0033-08 [I,A]

AB EP 650946 A1 UPAB: 20050511

An aqueous ceramic slurry comprises: (1) 10-90 weight% of the slurry of ceramic particles; (2) 0.5-10 weight%, based on weight of particles, of one or more emulsion polymers selected from: (i) emulsion polymers

having Tg of 20-500 C and comprising, as polymerised units: (a) 10-50 weight% of (meth)acrylate ester monomer(s); (b) 50-90 weight% vinyl(idene) aromatic monomer(s); (c) 0-10 weight% acid-containing monomer(s); and (d) 0-10 weight% comonomer(s); and (ii) emulsion polymers having Tg 40-550 C and

comprising, as polymerised units: (a) 65-85 weight% (meth)acrylate ester monomer(s); (b) 0-10 weight% vinyl(idene) aromatic monomer(s); (c) 0-15 weight% acid-containing monomer(s); (d) 0-10 weight% comonomer(s); where the total

amount

of monomers equals 100%; and (3) 90-10 weight% water. Also claimed are: (I) preparation of ceramic green bodies; (II) dried ceramic mixture comprising ceramic particles and (2); (III) a ceramic green body comprising ceramic particles and (2); and (IV) preparation of a sintered ceramic product.

USE - The ceramic materials are useful to prepare lightweight, strong, thermally and chemically resistant product useful as chromatographic media, grinding aids, abrasives, catalysts, adsorbents,

electronic components, construction components and machine components.

ADVANTAGE - Ceramic green bodies are provided having improved green strength and improved green density.

ABDT EP650946

An aqueous ceramic slurry comprises:

- (1) 10-90 weight% of the slurry of ceramic particles;
- (2) 0.5-10 weight%, based on weight of particles, of one or more emulsion polymers selected from:

(i) emulsion polymers having Tg of 20-500 C and comprising, as polymerised units:

- (a) 10-50 weight% of (meth)acrylate ester monomer(s);
- (b) 50-90 weight% vinyl(idene) aromatic monomer(s);
- (c) 0-10 weight% acid-containing monomer(s); and
- (d) 0-10 weight% comonomer(s); and

(ii) emulsion polymers having Tg 40-550 C and comprising, as polymerised units:

- (a) 65-85 weight% (meth)acrylate ester monomer(s);
 - (b) 0-10 weight% vinyl(idene) aromatic monomer(s);
 - (c) 0-15 weight% acid-containing monomer(s);
 - (d) 0-10 weight% comonomer(s); where the total amount of monomers equals 100%; and
- (3) 90-10 weight% water.

Also claimed are: (I) preparation of ceramic green bodies; (II) dried ceramic mixture comprising ceramic particles and (2); (III) a ceramic green body comprising ceramic particles and (2); and (IV) preparation of a sintered ceramic product.

USE

The ceramic materials are useful to prepare lightweight, strong, thermally and chemically resistant product useful as chromatographic media, grinding aids, abrasives, catalysts, adsorbents, electronic components, construction components and machine components.

ADVANTAGE

Ceramic green bodies are provided having improved green strength and improved green density.

CLAIMED PROCESSES

Preparation of ceramic green bodies comprises: (A) forming an aqueous ceramic slurry as above; (B) drying the slurry to form a dried ceramic mixture; and (C) compacting the dried ceramic mixture at an elevated pressure of at least 6.895 MPa (1000 psi) to form a ceramic green body. Preparation of a sintered ceramic product comprises: (A) heating to an elevated temperature of at least 8000 C, pref. at least 10000 C, a ceramic green body; and (B) maintaining the elevated temperature for at least 10 mins. to form a sintered ceramic product.

EXAMPLE

An emulsion polymer comprising 33 weight% ethylhexylacrylate, 3 weight% acrylic acid, 63 weight% styrene, 1 weight% ethyleneureamethacrylate, with

Tg of 290 C and Mw of 105,000 was used as a binder for alumina. An improved balance of properties, green strength and corrected relative green density of ceramic green bodies was seen. (SL)

PREFERRED MATERIALS

The ceramic particles are particles of alumina, aluminium nitride, silica, silicon, silicon carbide, silicon nitride, sialon, zirconia, zirconium nitride, zirconium carbide, zirconium boride, titania, titanium nitride, titanium carbide, barium titanate, titanium boride, boron nitride, boron carbide, tungsten carbide, tungsten boride, and oxides of tin, lead, ruthenium, tungsten, yttrium, nickel, magnesium, calcium, and mixts. of two or more such materials. The emulsion polymer(s) has/have a Mw of 30,000-300,000 and a particle size of 30-225 nm.

FS CPI
MC CPI: A04-C01; A04-F06E; A10-B03; A12-W12G; J01-D01; J01-E03C; J04-E04;
L02-J02B

L32 ANSWER 8 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 1990-369752 [50] WPIX

DNC C1990-160797 [21]

DNN N1990-281947 [21]

TI Biaxially oriented polyester film for magnetic recording medium - containing agglomerates of prim. particles of aluminium oxide, having excellent wear resistance

DC A23; A85; L03; P73; T03

IN SAKAMOTO S

PA (DAFO-C) DIAFOIL CO LTD; (DAFO-C) DIAFOIL HOECHST CO LTD

CYC 5

PI EP 401689 A 19901212 (199050)* EN
JP 03006239 A 19910111 (199108) JA C08J005-18
US 5096773 A 19920317 (199214) EN 6
EP 401689 B1 19931118 (199346) EN 10 [2] C08K003-22
DE 69004621 E 19931223 (199401) DE C08K003-22
JP 2856283 B2 19990210 (199911) JA 6 C08J005-18
KR 9604479 B1 19960406 (199913) KO C08J005-18

ADT EP 401689 A EP 1990-110377 19900531; JP 03006239 A JP 1989-140782 19890602; JP 2856283 B2 JP 1989-140782 19890602; DE 69004621 E DE 1990-69004621 19900531; EP 401689 B1 EP 1990-110377 19900531; DE 69004621 E EP 1990-110377 19900531; US 5096773 A US 1990-532199 19900601; KR 9604479 B1 KR 1990-8235 19900602

FDT DE 69004621 E Based on EP 401689 A; JP 2856283 B2 Previous Publ JP 03006239 A

PRAI JP 1989-140782 19890602

IC ICM C08K003-22

IPCR B29C0055-12 [I,A]; B29C0055-12 [I,C]; B29K0105-16 [N,A]; B29K0067-00 [N,A]; B29L0007-00 [N,A]; C08J0005-18 [I,A]; C08J0005-18 [I,C]; C08K0003-00 [I,C]; C08K0003-20 [I,A]; C08K0003-22 [I,A]; C08L0067-00 [I,A]; C08L0067-00 [I,C]; C08L0067-02 [I,A]; G11B0005-62 [I,C]; G11B0005-73 [I,A]; G11B0005-733 [I,A]

AB EP 401689 A UPAB: 20050502

Biaxially oriented polyester film containing 0.05-3 weight% agglomerates of prim.

particles of aluminium oxide having average particle size 5-40 nm, the agglomerates having average particle size of 50-400 nm. Film may further contain 0.01-1 weight% deposited particles having average particle size of 0.1-5 microns, 0.05-2 weight% additive particles having average particle size 0.1-3 microns and 0.01-3 weight% fine powders of a heat-resistant polymer having average particle size of 0.05-5 microns. Polyester film is a polyethylene terephthalate film in which the F-5 value in either the machine direction (MD) or transverse direction (TD) is not less than 12.0 kg/mm² or polyethylene 2,6-naphthalate film in which F-5 value in either MD or TD is not less than 15.0 kg/mm².

USE/ADVANTAGE - Film has excellent wear resistance and scruff resistance and is part. useful for a base film of a magnetic recording medium, especially magnetic tape. @(9pp Dwg.No.0/1)

FS CPI; GMPI; EPI

MC CPI: A05-E04E; A05-E05; A08-M03; A12-E08A; A12-E08A1; A12-S06; L03-B05L1
EPI: T03-A01B1; T03-A01C3

L32 ANSWER 9 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 1988-358595 [50] WPIX

DNC C1988-158841 [21]

TI Thermoplastic compsn. - containing poly-epsilon-caprolactone, metal powder and thermoplastic resin e.g. polyethylene

DC A23

IN HARADA J; INABA M; IWAMOTO O; ONO T

PA (TOKU-C) TOKUYAMA SODA KK

CYC 1

PI JP 63270759 A 19881108 (198850)* JA 4[0]

JP 05071055 B 19931006 (199343) JA 4[0] C08L067-04

ADT JP 63270759 A JP 1986-299002 19861217; JP 05071055 B JP 1986-299002 19861217

FDT JP 05071055 B Based on JP 63270759 A

PRAI JP 1986-299002 19861217

IC ICM C08L067-04

IPCR C08K0003-00 [I,C]; C08K0003-08 [I,A]; C08K0007-00 [I,C]; C08K0007-04 [I,A]; C08L0067-00 [I,A]; C08L0067-00 [I,C]; C08L0067-04 [I,A]

AB JP 63270759 A UPAB: 20050430

Compsn. comprises poly-epsilon-caprolactone (100 volume pts.) and emtal powder (5-50 volume pts.). Pref. metal powder is Al-powder. Ave.

particle size of metal powder is 5-200 micron.

Poly-epsilon-caprolactone is commercially available. Average mol. weight: 20,000-200,000 (pref. 40,000-150,000). Metal: is e.g. Al, Co, Cr, Cu, Si, etc. These can be used in combination. Particle size above

200 micron gives poor surface smoothness. Pref. volume pts. of metal powder is 10-40. If too little, the surface becomes sticky and the rate of softening and curing decrease. If too much, kneading becomes harder and moulding becomes more difficult.

USE/ADVANTAGE - Prod. has good mouldability at low temperature Reponse velocity of softening and hardening is quick and shows good strength.

FS CPI

MC CPI: A05-E02; A08-R05

L32 ANSWER 10 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 1976-20610X [11] WPIX

TI Article having cast metal appearance - by moulding and curing phenol-formaldehyde resins, polyisocyanate hardener, catalyst and metallic powder

DC A21; A32

IN SKUBON M J

PA (ASHL-C) ASHLAND OIL INC

CYC 1

PI US 3941743 A 19760302 (197611)* EN

ADT US 3941743 A US 1973-355124 19730427

US 1973-000355124 19730427

IPCR C08G0018-00 [I,C]; C08G0018-20 [I,A]; C08G0018-54 [I,A]; C08L0061-00 [I,C]; C08L0061-10 [I,A]

AB US 3941743 A UPAB: 20050415

An article having a cast metal appearance is prepared by (A) moulding and curing a room temperature curable, metal-filled resin compsn. comprising (a) either (i) the organic solvent-soluble condensn. polymer of a phenol of formula: (where R1-3 are H, (oxy)hydrocarbyl or halogen) and an aldehyde of formula R4CHO (where R4 is H or 1-8C hydrocarbyl) in the presence of catalytic concns. of a metal ion, or (ii) an organic solvent soluble

methylol-terminated phenolic resole; (b) 10-500 pts. (weight) liquid, di- or higher isocyanate as hardener; (c) 0.01-10.0 phr of a base having pKb = 7-11 as curing agent; and (d) either 20-50 weight % (based on compsn.) of a metallic powder selected from Cu, Ni, brass, bronze, Fe and steel, or 35-45 weight % Al, the powder having a particle size of 200-325 mesh and being of spherical shape; and (B) stripping the article from the mould and polishing its

surface. The prods. simulate cast metal prods., give good replication of pattern detail, and can be prepared at room temperature without requiring a high degree of skill or complicated appts. The process is especially for producing articles where metallic appearance is paramount to physical strength.

FS CPI

MC CPI: A05-C03; A05-C04; A08-D04; A08-R05; A11-B01; A11-C04

L32 ANSWER 11 OF 11 WPIX COPYRIGHT 2007 THE THOMSON CORP on STN

AN 1976-06371X [04] WPIX

TI Self-lubricating composite materials - contg acrylonitrile copolymers, unsatd. carboxylic acids, alkylacrylates

DC A14; Q68

PA (MITR-C) MITSUBISHI RAYON CO LTD

CYC 1

PI JP 50123767 A 19750929 (197604)* JA

ADT JP 50123767 A JP 1974-30204 19740315

IPCR C08K0003-00 [I,C]; C08K0003-08 [I,A]; C08K0003-30 [I,A]; C08L0033-00 [I,A]; C08L0033-00 [I,C]; C08L0033-02 [I,A]; C08L0033-18 [I,A]; C08L0033-20 [I,A]; F16N0015-00 [I,A]; F16N0015-00 [I,C]

AB JP 50123767 A UPAB: 20050415

Copolymers of acrylonitrile 60-96, ethylenically unsatd. carboxylic acids 2-20, and 1-4C alkylacrylates 2-20 weight% were mixed with 1-32 (to 32 nitrile groups of the copolymer) Cu ions-containing polymers 40-85, Al powders (<300 mu particle size) 10-55, and MoS2 powders (<300 mu particle size) 5-30 volume%. In an example, 550 parts H2O was adjusted to pH 3 with H2SO4, mixed at 50 degrees with a solution containing 0.7 part K2S2O8 and 1.43 parts NaHSO3 in 40 parts H2O, 10 parts solution containing 0.2 part FeSO4 7H2O in 100 parts H2O, and 0.5 part Na2SO4, mixed during 2 hr with acrylonitrile 85, methylacrylate 5, and acrylic acid 10 parts, and stirred for 1.5 hr at 50 degrees to give 85.1 parts pulverous copolymer. The copolymer (50 parts) was then suspended in a solution containing 17.1 parts CuCl2.2H2O in 200 parts H2O, stirred for 30 min at 70 degrees with 6.9 parts HCl hydroxylaminesalt dissolved in 50 parts H2O, dried for 48 hr in vacuo, and the powders (bulk sp. gr. 1.4) obt'd. were mixed with 10 volume% Al powders (bulk sp.gr. 2.7) and 10 volume% MoS2, powders (bulk sp. gr. 4.8), ball-milled with 0.5 weight% (to total) Zn stearate powders, and press-moulded for 10 min at 200 degrees and 2000 kg/cm2 to give a specimen with 14 kg/mm2 compressive strength and 0.36 frictional coefficient to a S55C steel.

FS CPI; GMPI

MC CPI: A04-D03A; A04-F01; A08-M03; A08-R05; A10-E16

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L4 1 SEA FILE=REGISTRY ABB=ON 7429-90-5
L6 19437 SEA FILE=HCAPLUS ABB=ON (L4 OR AL OR ALUMINUM OR ALUMINIUM) (4A)
) PARTICLE?
L15 1962922 SEA FILE=HCAPLUS ABB=ON L3 OR PP OR POLYPROPYLENE OR POLYMER#
OR COPOLYMER#
L16 2110 SEA FILE=HCAPLUS ABB=ON L6 AND L15
L17 10 SEA FILE=HCAPLUS ABB=ON L16 AND SIZE(3A) (305 OR 310 OR 315 OR
320 OR 325 OR 330 OR 335 OR 340 OR 345 OR 350 OR 355 OR 360 OR
365 OR 370 OR 375 OR 380 OR 390 OR 395 OR 400)
L18 0 SEA FILE=HCAPLUS ABB=ON L16 AND SIZE(3A) (205 OR 215 OR 225 OR
235 OR 245 OR 255 OR 265 OR 275 OR 285 OR 295)
L19 35 SEA FILE=HCAPLUS ABB=ON L16 AND SIZE(3A) (200 OR 210 OR 220 OR
230 OR 240 OR 250 OR 260 OR 270 OR 280 OR 290 OR 300)
L20 44 SEA FILE=HCAPLUS ABB=ON (L17 OR L18 OR L19)
L23 25 SEA FILE=HCAPLUS ABB=ON L20 AND PLASTIC?/SC,SX
L24 0 SEA FILE=HCAPLUS ABB=ON L20 AND POLYMER?/SC,SX
L29 3 SEA FILE=HCAPLUS ABB=ON L20 AND NONFERROUS?/SC,SX
L30 26 SEA FILE=HCAPLUS ABB=ON L23 OR L24 OR L29

=> D L30 BIB ABS IND 1-26

L30 ANSWER 1 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:981558 HCAPLUS

DN 145:346432

TI Transparent electric conductor composition, conductor films, and conductor materials

IN Yamamoto, Yoshinori; Doi, Hidekaru

PA Hitachi Maxell Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 11pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006253025	A	20060921	JP 2005-69567	20050311
PRAI	JP 2005-69567		20050311		

AB The title transparent elec. conductor composition as coating materials comprises conductive inorg. oxide particles (size 5-200 nm), ionic liquid, and a polymer binder. The conductive inorg. oxide may be In oxide, ITO, Zn oxide, and/or Al oxide. The ionic liquid contains imidazolium, pyridinium, pyrrolidinium, sulfonium, and/or ammonium salts. The coated composition gives the conductor films and materials excellent transparent conductivity.

CC 76-2 (Electric Phenomena)

Section cross-reference(s): 38, 57

ST inorg oxide particle polymer ionic liq transparent conductor

- coating
- IT Coating materials
- Films
- Transparent films
- (elec. conductive; transparent elec. conductor composition and conductor films and conductor materials)
- IT Electric conductors
- (films, transparent; transparent elec. conductor composition and conductor films and conductor materials)
- IT Electric conductors
- (films; transparent elec. conductor composition and conductor films and conductor materials)
- IT Oxides (inorganic), properties
- RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
- (particles; transparent elec. conductor composition and conductor films and conductor materials)
- IT Binders
- (polymer; transparent elec. conductor composition and conductor films and conductor materials)
- IT Ionic liquids
- (transparent elec. conductor composition and conductor films and conductor materials)
- IT Quaternary ammonium compounds, properties
- RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses)
- (transparent elec. conductor composition and conductor films and conductor materials)
- IT Polyesters, properties
- RL: DEV (Device component use); PRP (Properties); USES (Uses)
- (transparent elec. conductor composition and conductor films and conductor materials)
- IT 25608-33-7, BR 113
- RL: MOA (Modifier or additive use); USES (Uses)
- (acrylic binder; transparent elec. conductor composition and conductor films and conductor materials)
- IT 1112-67-0, Tetra-n-butylammonium chloride 3115-68-2,
- Tetra-n-butylphosphonium bromide 65039-08-9 69227-51-6 186088-50-6,
- N-Butylpyridinium hexafluorophosphate
- RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
- (conductor material composition; transparent elec. conductor composition and conductor films and conductor materials)
- IT 1312-43-2, Indium oxide 1314-13-2, Zinc oxide, properties 1344-28-1,
- Aluminum oxide, properties 50926-11-9, ITO
- RL: DEV (Device component use); MOA (Modifier or additive use); PRP (Properties); USES (Uses)
- (inorg. conductor particles; transparent elec. conductor composition and conductor films and conductor materials)
- IT 25038-59-9, properties
- RL: DEV (Device component use); PRP (Properties); USES (Uses)
- (substrate; transparent elec. conductor composition and conductor films and conductor materials)

L30 ANSWER 2 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2006:141735 HCAPLUS

DN 144:193463

TI Synthetic resin moldings having coatings showing high visible light transmittance and good heat ray shielding property, their manufacture, and their automobile windshields

IN Iwakiri, Tsuneaki

PA Mitsubishi Engineering-Plastic Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 28 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006044171	A	20060216	JP 2004-231519	20040806
PRAI	JP 2004-231519		20040806		

OS MARPAT 144:193463

AB The moldings comprise injection-molded transparent synthetic resin layers, 1-10- μ m thick thermosetting acrylic polymer primer layers, and 1-10- μ m thick cured layers of coatings containing polyfunctional alkoxy silanes in this order, where 0.0005-0.05 part scaly Al powders having average particle size 1-50 μ m and thickness 1/10-1/200 the particle size are dispersed in the resin layers per 100 parts of the resins. Thus, a coating contained MeSi(OMe)₃, CF₃CH₂CH₂Si(OMe)₃, Snowtex 30 (colloidal silica; average particle size 10-20 nm), Snowtex IBA-ST (colloidal silica; average particle size 10-20 nm), KP 341 (polyoxyalkylene glycol-dimethylsiloxane copolymer), and AcO-NMe₄⁺, and XL 183 (silicone-containing UV absorber). A composition containing Iupilon S 3000 (bisphenol A polycarbonate), stearic acid, Unister H 476 (pentaerythritol tetrastearate), Adeka Stab 2112 (P-based antioxidant), Seesorb 709 (N-containing UV absorber), SS 7000AR (Al flake), and SBT 554RD (Al flake) was injection-molded, coated with a primer composition containing Et acrylate-ethylene glycol dimethacrylate-glycidyl methacrylate- γ -methacryloyloxypropyltrimethoxysilane-Me methacrylate-vinyl acetate copolymer and 2,2',4,4'-tetrahydroxybenzophenone, coated with the coating, and cured by heat, showing good weather resistance and visible light transmittance 60%.

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 42

ST polycarbonate molding acrylic polymer primer silsesquioxane coating; automobile windshield polycarbonate molding silsesquioxane coating; weather resistance polycarbonate molding automobile windshield; heat ray shield polycarbonate molding UV absorber; aluminum powder polycarbonate molding heat ray shield

IT Antioxidants

(P-based; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)

IT Polysiloxanes, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(UV absorbers for coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)

IT Silsesquioxanes

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)

IT Crosslinking catalysts

(amine carboxylates and/or quaternary ammonium carboxylates; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)

- IT Carboxylic acids, uses
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
(ammonium salts, crosslinking catalysts for coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Polycarbonates, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(aromatic; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Windshields
(automotive; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Quaternary ammonium compounds, uses
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
(carboxylates, crosslinking catalysts for coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Light stabilizers
(cyclic hindered amines, for primers; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Silsesquioxanes
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorine-containing, coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Light shields
(heat ray shields; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Amines, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(hindered, cyclic, light stabilizers for primers; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT UV stabilizers
(manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Molded plastics, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Polysiloxanes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material

- use); USES (Uses)
(polyoxyalkylene-, KP 341, coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Polyoxyalkylenes, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-, KP 341, coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Silsesquioxanes
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysiloxane-, coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Fatty acids, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(saturated, C8-22; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Fluoropolymers, uses
Polysiloxanes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(silsesquioxane-, coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Fatty acids, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(unsatd., C8-22; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT Coating materials
(weather-resistant; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 3147-75-9, Seesorb 709
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(UV absorber; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 749261-13-0, XL 183
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(UV absorbers for coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 131-55-5, 2,2',4,4'-Tetrahydroxybenzophenone
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(UV absorbers for primers; manufacture of synthetic resin moldings having

- coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 31570-04-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(antioxidant; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 25037-45-0, Bisphenol A-carbonic acid **copolymer**
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(assumed monomers; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 149000-95-3P, Dimethyldimethoxysilane-methyltrimethoxysilane **copolymer** 156084-07-0P 749269-93-0P, Methyltrimethoxysilane-propyltrimethoxysilane **copolymer** 754195-37-4P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 7631-86-9, Colloidal silica, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(colloidal, Snowtex 30, Snowtex IBA-ST, for coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 10581-12-1, Tetramethylammonium acetate
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)
(crosslinking catalysts for coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 57-11-4, Stearic acid, uses 115-83-3
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(for primers; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 107119-91-5, Adeka Stab LA 62
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(light stabilizers for primers; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 24936-68-3, Iupilon S 3000, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)
- IT 124479-37-4P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(primers or coatings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)

IT 7429-90-5, Aluminum, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(scaly power, SS 7000AR, SBT 554RD, dispersed in moldings; manufacture of synthetic resin moldings having coatings showing good weather resistance and heat ray shielding property, and high visible light transmittance for automobile windshields)

L30 ANSWER 3 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1103361 HCAPLUS

DN 143:368099

TI Talc-filled **polymer** blend having metallic effect

IN Ali, Mir L.; Jagers, Johnny D.; Dorsky, Stuart; Barnum, David E.; Vold, Yvonne D.; Bal, James J.

PA Ferro Corporation, USA

SO U.S. Pat. Appl. Publ., 4 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

applicant

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005228100	A1	20051013	US 2004-823381	20040413
PRAI	US 2004-823381		20040413		

AB A **polymer** blend that displays a high metallic effect and is capable of being utilized in elevated temperature applications comprises 3-12% metal particles, 30-60% talc and 35-70% olefinic **polymer**, e.g., **polypropylene**. The metal **particles** component comprises **A1 particles** having an undefined configuration and an average particle size of 200-400 μ m.

IC ICM C08K003-08

ICS C08K003-34

INCL 524439000; 524451000

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 56

ST **polypropylene** talc blend metallic effect **aluminum particle filler**

IT Metals, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(particles; talc-filled **polymer** blend having metallic effect)

IT **Polymer** blends

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)

(talc-filled **polymer** blend having metallic effect)

IT 14807-96-6, Talc, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(filler; talc-filled **polymer** blend having metallic effect)

IT 7429-90-5, Aluminum, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(particles; talc-filled **polymer** blend having metallic effect)

IT 9003-07-0, **Polypropylene**

RL: POF (Polymer in formulation); TEM (Technical or engineered material

use); USES (Uses)
 (talc-filled **polymer** blend having metallic effect)

L30 ANSWER 4 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:743285 HCAPLUS

DN 137:236099

TI Preparation of coated metal powder for manufacture of molds by rapid laser sintering

IN Bai, Peikang; Gao, Jianfeng

PA Beifang Hengli Science and Technology Development Co., Ltd., Peop. Rep. China

SO Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.
 CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1333099	A	20020130	CN 2001-122273	20010705
PRAI	CN 2001-122273		20010705		

AB The powder is prepared by surface treating the metal powder, mixing with coating solution, drying, crushing, and adding modified nanoparticles. The metal powder can be Fe alloy or Al alloy powder with particle size of 200-500 mesh. The surface treatment can be carried out by degreasing with diluted Na₂CO₃ solution, removing oxides with diluted HCl, washing with water, and treating with wetting agent. The coating solution can be made by dissolving lubricant, de-molding agent, wetting-dispersing agent, and thermoplastics having different m.p. in a halogenated hydrocarbon solution. The nanoparticles can be nanometer oxide or metal powder. The wetting agent can be poly(ethylene glycol) nonylphenyl ether, poly(ethylene glycol) fatty alc. ethers, or poly(ethylene glycol) fatty acid esters, and is added at 1-5 g/1000 g metal powder; the lubricant can be synthetic wax, polyethylene wax, **polypropylene** wax, and liquid wax; the de-molding agent can be stearate; the wetting-dispersing agent can be nonionic surfactants, anionic surfactants, and polymeric wetting-dispersing agent; and the thermoplastics can be polyethylene acetate, polystyrene, polyacrylate, polyethylene ethers, etc.

IC ICM B22F001-02

ICS B22F031-05

CC 56-4 (Nonferrous Metals and Alloys)

Section cross-reference(s): 38

ST coating iron alloy powder mold laser sintering; aluminum alloy powder coating mold laser sintering; lubricant demolding agent coating soln metal powder; wetting dispersing agent thermoplastic coating soln metal powder; nanoparticle modifying agent coating metal powder

IT Fatty acids, uses

RL: NUU (Other use, unclassified); USES (Uses)

(esters, wetting agent; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT Sintering

(laser; preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT Waxes

RL: NUU (Other use, unclassified); USES (Uses)

(lubricant, coating solution containing; for preparation of coated metal powder for

manufacture of molds by rapid laser sintering)

IT Molds (forms)

Powders
(preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT Polyamides, uses
RL: NUU (Other use, unclassified); USES (Uses)
(thermoplastics, coating solution containing; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 57-11-4, Octadecanoic acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(de-molding agent, coating solution containing; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 12617-23-1 12649-48-8 54611-20-0, 1Cr18Ni9Ti
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(metal powder; preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 1344-28-1, Alumina, uses
RL: NUU (Other use, unclassified); USES (Uses)
(nanoparticles, modifying agent; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 7429-90-5, Aluminum, uses
RL: NUU (Other use, unclassified); USES (Uses)
(nanoparticles, modifying agent; preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 245084-24-6, BYK-W972 458541-82-7, YD 100 (surfactant)
RL: NUU (Other use, unclassified); USES (Uses)
(nonionic surfactant, coating solution containing; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 458541-46-3, Texaphor 3601
RL: NUU (Other use, unclassified); USES (Uses)
(polymeric wetting-dispersing agent; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 9003-09-2, Polyvinyl methyl ether 9003-20-7, Poly(vinyl acetate)
9003-53-6, Polystyrene 10344-93-1, Acrylate, uses 24937-78-8, Ethylene-vinyl acetate copolymer
RL: NUU (Other use, unclassified); USES (Uses)
(thermoplastics, coating solution containing; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

IT 9016-45-9, Poly(ethylene glycol) nonylphenyl ether
RL: NUU (Other use, unclassified); USES (Uses)
(wetting agent; for preparation of coated metal powder for manufacture of molds by rapid laser sintering)

L30 ANSWER 5 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
AN 2002:610360 HCAPLUS
DN 137:155606
TI Glittery plastic articles containing glossy pigments and filler particles for pearlescent effect
IN Brehm, Hans-Juergen; Kieser, Manfred; Aust, Emil
PA Merck Patent G.m.b.H., Germany
SO Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1231237	A1	20020814	EP 2002-1037	20020118
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	DE 10106198	A1	20020814	DE 2001-10106198	20010210
	JP 2002275377	A	20020925	JP 2002-30423	20020207
	CN 1369517	A	20020918	CN 2002-104764	20020210
	US 2002120051	A1	20020829	US 2002-71238	20020211
	US 7019048	B2	20060328		
PRAI	DE 2001-10106198	A	20010210		
AB	A title article contains glossy pigments with pearlescent effect which are mainly planar, aligned metal or light-refracting particles or platelets, and a filler comprising hollow or compact particles having mainly isometric shape and particle size 10-200 µm. The hollow or compact glass microspheres are preferred as fillers. For example, wetting the surface of 978 g Stamyln PPH 10 granulate with 2 g diisooctyl phthalate, blending the granulate with 10 g Iriodin 123 and 10 g Scotchlite K 37 and injection molding the mixture gave a title article.				
IC	ICM C08K009-02 ICS C08K007-16; C08K007-22				
CC	37-6 (Plastics Manufacture and Processing) Section cross-reference(s): 42				
ST	polypropylene glittery article titania coated mica glossy pigment; glass microsphere filler polypropylene glittery article				
IT	Glass microspheres RL: TEM (Technical or engineered material use); USES (Uses) (fillers; glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	Fillers Pearlescent pigments (glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	Plastics, uses RL: TEM (Technical or engineered material use); USES (Uses) (glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	Pigments, nonbiological (glossy; glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	13463-67-7, Titanium dioxide, uses RL: TEM (Technical or engineered material use); USES (Uses) (coating on aluminum pigment particles; glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	9003-07-0, Stamyln PPH 10 749926-11-2, Scotchlite K 37 RL: TEM (Technical or engineered material use); USES (Uses) (glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	152987-16-1, Iriodin 123 RL: TEM (Technical or engineered material use); USES (Uses) (pigment; glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
IT	1344-28-1, Alumina, uses RL: TEM (Technical or engineered material use); USES (Uses) (titanium dioxide-coated, pigment; glittery plastic article containing glossy pigments and filler particles for pearlescent effect)				
RE.CNT	2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD				

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 6 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:428987 HCAPLUS

DN 137:21055

TI Curable epoxy resin compositions containing phosphate fillers having high mechanical strength

IN Beisele, Christian

PA Vantico Ag, Switz.

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002044273	A1	20020606	WO 2001-EP13431	20011120
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2430074	A1	20020606	CA 2001-2430074	20011120
AU 2002020717	A5	20020611	AU 2002-20717	20011120
EP 1352026	A1	20031015	EP 2001-998594	20011120
EP 1352026	B1	20040721		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004522816	T	20040729	JP 2002-546628	20011120
AT 271584	T	20040815	AT 2001-998594	20011120
ES 2223963	T3	20050301	ES 2001-1998594	20011120
US 2004039084	A1	20040226	US 2003-433137	20030529

PRAI CH 2000-2316 A 20001129
 WO 2001-EP13431 W 20011120

AB The composition comprises (a) an epoxy resin having average ≥ 1 1,2-epoxy group/mol, (b) a curing agent for the epoxy resin, (c) a core/shell polymer as toughness modifier, (d) aluminum oxide having particle size distribution 0.1-300 μ m and (e) a phosphate fillers (RO)nPO(OH)3-n [n = 1-2; R = R' (OCmH2m)a(OCO-xH2x)b-; a = 0-50; b = 0-50; m = 1-6; x = 1-5; R' = C4-24 alkenyl, C4-24 alkyl, C5-30 aryl, CH2:CHCO-, CH2:C(CH3)CO-]. The thermally crosslinked epoxy compns. are useful as elec. insulating construction materials for elec. or electronic components, especially in the manufacture of so-called "spacers"

for gas-insulated switching systems and generator switches. Thus, 500 parts mixture of CY 5595 (core-shell modified bisphenol A epoxy resin) 42.25, aluminum oxide 56.75, bis[2-(methacryloyloxy)ethyl] phosphate (PM 2) 0.50 and highly disperse Al2O3 (HDA) 0.5% was blend with 500 parts curing agent mixture of HY 5996 (modified carboxylic anhydride) 37.22, aluminum oxide 61.75, PM 2 0.50 and HDA 1.0%, molded to give and cured to give test piece showing tensile strength 79.5 MPa, elongation 1.67% and modulus of elasticity 8227 MPa.

IC ICM C08L063-00

ICS C08K003-22; H01B003-40; C08L051-00; C08K005-521

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 76

ST epoxy curable filler insulator mech strength; alumina phosphate filler
epoxy elec insulator; core shell polymer toughness modifier
epoxy resin

IT Molded plastics, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(casting; curable epoxy resin compns. containing phosphate fillers having
high mech. strength for elec. insulators)

IT Electric insulators
Fillers
(curable epoxy resin compns. containing phosphate fillers having high mech.
strength for elec. insulators)

IT Epoxy resins, preparation
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable epoxy resin compns. containing phosphate fillers having high mech.
strength for elec. insulators)

IT 433922-65-7P 433922-66-8P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable epoxy resin compns. containing phosphate fillers having high mech.
strength for elec. insulators)

IT 1344-28-1, Alumina, uses 32435-46-4, Bis[2-(methacryloyloxy)ethyl]
phosphate
RL: MOA (Modifier or additive use); USES (Uses)
(curable epoxy resin compns. containing phosphate fillers having high mech.
strength for elec. insulators)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 7 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:472091 HCAPLUS
DN 135:54921
TI Polyester film for magnetic recording medium, and magnetic recording tape
IN Ono, Masaaki; Katsuya, Okamoto; Tsuzuki, Toshihiro; Morimoto, Tsutomu
PA Toray Industries, Inc., Japan
SO Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW

DT Patent
LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1111594	A1	20010627	EP 2000-127798	20001219
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2001243616	A	20010907	JP 2000-377517	20001212
	US 6468627	B2	20021022	US 2000-739012	20001219
	US 2001006743	A1	20010705		
	CN 1311507	A	20010905	CN 2000-136457	20001225
PRAI	JP 1999-366403	A	19991224		

AB Disclosed is a base film that has excellent electromagnetic conversion
property over the entire length from a roll core portion to a surface
portion of the film product and that is suitable for the production of digital
videotapes with reduced dropouts. A polyester film for a magnetic
recording medium includes at least a polyester layer A and a polyester
layer B laminated. A center-line surface average roughness (SRa value) of a
layer A-side surface of the film is 2 nm to 4 nm, and a 10-point average
surface roughness (SRz value) of the layer A-side surface is 10 nm to 40
nm. The layer B contains a fine particle α whose average particle size
is ≥ 50 nm and < 250 nm, and a fine particle β whose average

particle size is .gtoreq.250 nm and <500 nm. The content of the fine particle α in the layer B is 0.1% to 1.0%. The content of the fine particle β in the layer B is 0.01% to 0.10%. A magnetic recording tape is formed by providing a ferromagnetic metal thin film on a layer A-side surface of the polyester film.

IC ICM G11B005-64

ICS B32B027-36; B32B033-00

CC 77-8 (Magnetic Phenomena)

Section cross-reference(s): 38, 66

ST polyester film magnetic recording medium tape; polyethylene terephthalate polyethylenenaphthalate film digital video cassette tape; ferromagnetic metal thin film magnetic recording tape

IT Coupling agents

(Aminoethylsilane, polyester surface coating; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Waxes

RL: MOA (Modifier or additive use); USES (Uses)

(Chinese wax, polyester oligomers precipitation prevention; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Sulfonic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)

(arenesulfonic, soap, polyester oligomers precipitation prevention;

laminated

polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Carbon black, uses

RL: MOA (Modifier or additive use); USES (Uses)

(back coat; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Polyoxyalkylenes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(copolymer components in polyester film; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Sputtering

(diamondlike carbon; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Lamination

Magnetic recording heads

Magnetic tapes

Video tapes

(laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Polyesters, properties

RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)

(laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Fluoropolymers, uses

RL: MOA (Modifier or additive use); USES (Uses)

(laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

IT Polyurethanes, uses

RL: MOA (Modifier or additive use); USES (Uses)

(organic compound coating, derivs.; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and

- magnetic recording tape)
- IT Caseins, processes
Gelatins, processes
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(organic compound coating; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Beeswax
(polyester oligomers precipitation prevention; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Carnauba wax
Lanolin
RL: MOA (Modifier or additive use); USES (Uses)
(polyester oligomers precipitation prevention; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Binders
(polyurethane resin; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Fatty acids, uses
Naphthenic acids, uses
Resin acids
RL: MOA (Modifier or additive use); USES (Uses)
(soap, polyester oligomers precipitation prevention; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Evaporation
(vacuum, ferromagnetic metal film; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Polyesters, properties
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(water-soluble; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT Waxes
RL: MOA (Modifier or additive use); USES (Uses)
(whale, polyester oligomers precipitation prevention; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 98-11-3, benzenesulfonic acid, uses
RL: MOA (Modifier or additive use); USES (Uses)
(alkyl derivs., sodium and lithium salts, soap, polyester oligomers precipitation prevention; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 57-55-6, Propyleneglycol, uses 88-99-3, Phthalic acid, uses 89-05-4, Pyromellitic acid 105-08-8, 1,4-Cyclohexanedimethanol 111-20-6, Sebacic acid, uses 111-46-6, Diethyleneglycol, uses 121-91-5, Isophthalic acid, uses 124-04-9, Adipic acid, uses 126-30-7, Neopentylglycol 528-44-9, Trimellitic acid 589-29-7, p-Xylylene glycol 6362-79-4, 5-Sodium sulfoisophthalic acid 25322-68-3, Polyethyleneglycol
RL: MOA (Modifier or additive use); USES (Uses)
(copolymer components in polyester film; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)

- IT 7440-44-0, Carbon, uses
RL: MOA (Modifier or additive use); USES (Uses)
(diamondlike; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 7439-89-6, Iron, processes 7440-02-0, Nickel, processes 7440-48-4, Cobalt, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(ferromagnetic metal thin film; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 471-34-1, Calcium carbonate, uses 1335-30-4, Aluminum silicate 1344-28-1, Alumina, uses 9003-01-4, Polyacrylic acid 9003-53-6, Polystyrene
RL: MOA (Modifier or additive use); USES (Uses)
(fine particles; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 24968-11-4, Polyethylene-2,6-naphthalate 25038-59-9, Polyethylene terephthalate, properties
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 9002-84-0, Polytetrafluoroethylene 9016-00-6, Polydimethylsiloxane
RL: MOA (Modifier or additive use); USES (Uses)
(laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 9004-34-6, Cellulose, processes
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(organic compound coating, derivs.; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 9002-89-5, Polyvinylalcohol
RL: MOA (Modifier or additive use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(organic compound coating; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 7631-86-9, Silica, uses 9004-67-5, Methylcellulose
RL: MOA (Modifier or additive use); USES (Uses)
(polyester surface coating; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- IT 11104-61-3, Cobalt oxide
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(thin film; laminated polyethylene terephthalate and polyethylene-2,6-naphthalate films for magnetic recording medium and magnetic recording tape)
- RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L30 ANSWER 8 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
AN 2001:421072 HCAPLUS
DN 135:23542
TI Manufacture of lightweight inorganic moldings using styrene-type resin cellular particles

IN Yamada, Naoaki; Osugi, Kumiko; Kumagaya, Tatsuo; Fujisato, Shunji
 PA Kanegafuchi Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001158675	A	20010612	JP 1999-340235	19991130
PRAI	JP 1999-340235		19991130		

AB The process involves mixing (A) compns. containing inorg. hydraulic materials, aggregates, styrene-type resin cellular particles which do not expand anymore as lightwt. aggregates, fibrous materials, admixts., etc. with (B) water, molding, and heating and curing at a temperature higher than the m.p. of the styrene-type resin cellular particles to form cells in the moldings. Preferably, the compns. contain 20-50% Al oxides with mean particle size 50-300 µm, bulk sp. gr. 0.1-0.7, and strength under pressure ≥8 MPa. The moldings have smooth surfaces, are asbestos-free and yet have good mech. properties.

IC ICM C04B038-06
 ICS B28B003-20; C04B028-02; C04B040-02; C04B014-04; C04B016-02; C04B016-06; C04B016-08; C04B014-02; C04B024-38; C04B103-44; C04B111-40

CC 58-1 (Cement, Concrete, and Related Building Materials)
 Section cross-reference(s): 38

ST styrene resin cellular particle cement compn; lightwt cement molding cellular asbestos free

IT Sand
 RL: MOA (Modifier or additive use); USES (Uses)
 (aggregates; manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT Cellulose pulp
 Cement (construction material)
 (manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT Polypropene fibers, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT 1309-48-4, Magnesia, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (admixts. containing; manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT 25085-53-4, Isotactic polypropylene
 RL: MOA (Modifier or additive use); USES (Uses)
 (fibers; manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT 1344-28-1, Alumina, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (lightwt. aggregates containing; manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT 13983-17-0, Wollastonite
 RL: MOA (Modifier or additive use); USES (Uses)
 (manufacture of lightwt. cellular cement-based moldings using styrene-type resin cellular particles)

IT 100-42-5D, Styrene, polymers
 RL: NUU (Other use, unclassified); USES (Uses)
 (manufacture of lightwt. cellular cement-based moldings using styrene-type

resin cellular particles)

L30 ANSWER 9 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:842206 HCAPLUS
 DN 134:29981
 TI Metal oxide pigment dispersion containing polyoxyalkylene-siloxane block
 copolymer dispersant
 IN Kessell, Lorna Margaret
 PA Acma Limited, UK
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000071623	A1	20001130	WO 2000-GB2000	20000525
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1198523	A1	20020424	EP 2000-935328	20000525
	EP 1198523	B1	20040811		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
	AT 273353	T	20040815	AT 2000-935328	20000525
	ES 2225145	T3	20050316	ES 2000-935328	20000525
	US 2002054999	A1	20020509	US 2001-988773	20011120
	US 6683130	B2	20040127		
PRAI	GB 1999-12002	A	19990525		
	WO 2000-GB2000	W	20000525		

AB Title dispersion comprises at least 30 weight% of particles of a metal oxide pigment having an average primary particle size of <200 nm dispersed in a siloxane fluid dispersing medium and a dispersing agent wherein the metal oxide particles are hydrophobic and the dispersing agent is a polyalkylene oxide-polyalkylsiloxane block copolymer comprising at least 30 weight% of polyalkylsiloxane. The dispersion is particularly suitable for use as an ingredient in sunscreens cosmetics.

IC ICM C09C003-12

ICS C09C001-36; C09C001-24; C09C001-04

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 62

ST metal oxide dispersion polyoxyalkylene siloxane block dispersant

IT Cyclosiloxanes

RL: TEM (Technical or engineered material use); USES (Uses)

(di-Me; metal oxide pigment dispersion containing polyoxyalkylene-siloxane block copolymer dispersant)

IT Dispersing agents

Sunscreens

(metal oxide pigment dispersion containing polyoxyalkylene-siloxane block copolymer dispersant)

IT Polysiloxanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(metal oxide pigment dispersion containing polyoxyalkylene-siloxane block copolymer dispersant)

IT Polysiloxanes, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyoxyalkylene-, block; metal oxide pigment dispersion containing
 polyoxyalkylene-siloxane block copolymer dispersant)

IT Polyoxyalkylenes, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (polysiloxane-, block; metal oxide pigment dispersion containing
 polyoxyalkylene-siloxane block copolymer dispersant)

IT 13463-67-7, Titanium oxide, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (alumina-coated; metal oxide pigment dispersion containing
 polyoxyalkylene-siloxane block copolymer dispersant)

IT 637-12-7, Aluminum stearate 1344-28-1, Alumina, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (coating for TiO2 particles; metal oxide pigment dispersion
 containing polyoxyalkylene-siloxane block copolymer dispersant)

IT 75-21-8D, Ethylene oxide, polyalkylene oxide-polyalkylsiloxane block
 copolymers 75-56-9D, Propylene oxide, polyalkylene
 oxide-polyalkylsiloxane block copolymers 1314-13-2, Zinc
 oxide, uses 1332-37-2, Iron oxide, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (metal oxide pigment dispersion containing polyoxyalkylene-siloxane block
 copolymer dispersant)

IT 2116-84-9, Phenyltris(trimethylsiloxy)silane 31900-57-9D,
 Dimethylsilanediol homopolymer, trimethylsilyl-terminated 42557-10-8,
 Dow corning 200 139465-30-8, Dow corning 3225C
 RL: TEM (Technical or engineered material use); USES (Uses)
 (metal oxide pigment dispersion containing polyoxyalkylene-siloxane block
 copolymer dispersant)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 10 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:553634 HCAPLUS
 DN 133:151436
 TI Polycarbonate molding compositions with antistatic properties, and their
 use
 IN Zobel, Michael; Eckel, Thomas; Wittmann, Dieter; Keller, Bernd
 PA Bayer Aktiengesellschaft, Germany
 SO PCT Int. Appl., 30 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000046285	A1	20000810	WO 2000-EP515	20000124
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
DE 19904392	A1	20000810	DE 1999-19904392	19990204
CA 2364405	A1	20000810	CA 2000-2364405	20000124
BR 2000007925	A	20011106	BR 2000-7925	20000124
EP 1151031	A1	20011107	EP 2000-903621	20000124
EP 1151031	B1	20060315		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, LT, LV, FI, RO, CY

JP 2002536482	T	20021029	JP 2000-597353	20000124
AT 320466	T	20060415	AT 2000-903621	20000124
ES 2259995	T3	20061101	ES 2000-903621	20000124
TW 232875	B	20050521	TW 2000-89101131	20000125
PRAI DE 1999-19904392	A	19990204		
WO 2000-EP515	W	20000124		

AB The invention relates to thermoplastic molding materials containing thermoplastic polycarbonate and 0.01-30 parts by weight per 100 parts by weight (polycarbonate) aluminum compds. with an average particle diameter of 1 nm-20 µm, preferably 1 nm-10 µm or more preferably 5-500 nm. An example was given which comprised bisphenol A polycarbonate, SAN polymer, ABS graft copolymer, and Pural 200 of particle size 20-40 nm.

IC ICM C08K003-00

ICS C08K003-22; C08L069-00

CC 37-6 (Plastics Manufacture and Processing)

ST polycarbonate molding compn antistatic; aluminum compd antistatic agent

IT Antistatic agents

(aluminum compound; polycarbonate molding compns. containing)

IT Polycarbonates, uses

RL: POF (Polymer in formulation); USES (Uses)

(antistatic molding compns. based on)

IT 1318-23-6, Pural 200

RL: MOA (Modifier or additive use); USES (Uses)

(antistatic agent; polycarbonate molding compns. containing)

IT 24936-68-3, Bisphenol A polycarbonate, SRU, uses 25037-45-0, Bisphenol A polycarbonate

RL: POF (Polymer in formulation); USES (Uses)

(antistatic molding compns. based on)

IT 9003-54-7, SAN polymer 106677-58-1, ABS graft copolymer

RL: MOA (Modifier or additive use); USES (Uses)

(polycarbonate antistatic molding compns. containing)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 11 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:720089 HCAPLUS

DN 128:13877

TI Laminated ink-jet recording material and process for producing same

IN Liu, Bo; Nemoto, Hiroyuki; Kubota, Masami; Mukoyoshi, Shun-ichiro

PA Oji Paper Company Limited, Japan

SO Eur. Pat. Appl., 38 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 803374	A2	19971029	EP 1997-106813	19970424
	EP 803374	A3	19971119		
	EP 803374	B1	20040630		
	R: DE, FR, GB				
	JP 09286165	A	19971104	JP 1996-102494	19960424
	JP 3411151	B2	20030526		
	JP 10086509	A	19980407	JP 1996-248267	19960919
	JP 10086510	A	19980407	JP 1996-248268	19960919
	JP 10071764	A	19980317	JP 1997-160765	19970618

JP 3751118 B2 20060301
JP 2003266930 A 20030925 JP 2003-28755 19970618
PRAI JP 1996-102494 A 19960424
JP 1996-162818 A 19960624
JP 1996-248267 A 19960919
JP 1996-248268 A 19960919
JP 1997-160765 A3 19970618
AB An ink jet recording material having high gloss and water resistance and are capable of recording thereon ink images having high color d. and clarity, has a transparent ink-receiving layer laminated on a substrate and including a water-soluble resin binder and colloidal secondary particles having an average size of 10 to 300 nm and including a plurality of primary particles of silica and/or Al silicate, and are produced by forming the ink-receiving layer on a shaping base, bonding the substrate to the ink-receiving layer on the shaping base and separating the resultant laminate from the shaping base. The substrates are paper and transparent plastics, and a typical binder is poly(vinyl alc.).
IC ICM B41M005-00
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 43, 74
ST ink jet printing sheet laminated; polyvinyl alc laminate jet printing sheet; transparent plastic ink jet printing laminate; paper ink jet printing laminate; aluminum silicate agglomerate colloidal printing sheet; silica agglomerate colloidal ink receiving layer
IT Polyesters, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(Melinex D 535, substrate; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
IT Laminated materials
Lamination
Paper substitutes
Projection slides
(laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
IT Laminated plastics, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
IT Ink-jet recording sheets
Ink-jet recording sheets
(paper; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
IT Paper
Paper
(printing, ink-jet; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
IT Polyolefins
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(substrate; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
IT 25038-59-9, PET polymer, uses
RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(Melinex D 535, substrate; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving

layers)
 IT 9002-89-5, PVA-124
 RL: TEM (Technical or engineered material use); USES (Uses)
 (PVA 135H and PVA 140H, ink-receiving layer binder; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
 IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (colloidal agglomerated, Nipsil E 1011 and Mizukasil C 212, ink-receiving layer filler; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
 IT 1335-30-4, Aluminum silicate
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (colloidal agglomerated, ink-receiving layer filler; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
 IT 9003-20-7D, Poly(vinyl acetate), partially saponified 143180-25-0, PVA 224 177646-18-3, PVA 235
 RL: TEM (Technical or engineered material use); USES (Uses)
 (ink-receiving layer binder; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
 IT 9002-88-4, Polyethylene
 RL: TEM (Technical or engineered material use); USES (Uses)
 (paper laminates, substrates; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)
 IT 9003-07-0, Yupo FPG 80
 RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (substrate; laminated ink-jet recording sheets having high gloss and water resistance, and highly transparent ink-receiving layers)

L30 ANSWER 12 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:360842 HCAPLUS

DN 123:11290

TI Epoxy resin casting compositions and heat- and impact-resistant cast products

IN Sugimoto, Toshio; Kawaguchi, Sadahiko; Ezaki, Satoshi

PA Mitsubishi Petrochemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06329878	A	19941129	JP 1993-145347	19930526
PRAI	JP 1993-145347		19930526		

AB The title compns. contain (a) epoxy resins with viscosity at 25° ≤100 P containing trifunctional or tetrafunctional liquid epoxy resins, (b) epoxy resin curing agents mainly comprising cyano-containing imidazoles, (c) metallic powders with average particle size ≤100 μm, and optionally (d) inorg. fillers except for metallic powders with smaller particle size than that of (c) in which c + d ≥ 200 parts (vs. 100 parts a + b). The compns. are useful in cast products. Thus, p-aminophenol triglycidyl derivative 100, 1-cyanoethyl-2-methylimidazole 8,

and powdered Al (average particle size 40 μ m)
325 g were kneaded, cast, then cured at 50-150° for 5 h to
give a product showing glass transition temperature 185°, notched Izod
impact strength 3.0 kg-cm/cm, and good thermal shock resistance.

IC ICM C08L063-00

ICS C08G059-32; C08G059-40; C08G059-50; C08K003-08

CC 38-3 (Plastics Fabrication and Uses)

ST epoxy resin casting compn imidazole; metal powd epoxy resin compn; impact
resistant epoxy resin compn; heat resistant epoxy resin compn; thermal
shock resistant epoxy compn

IT Crosslinking agents

(cyano-containing imidazoles; epoxy resin casting compns. containing
imidazole

curing agents and powdered metals and optionally inorg. fillers with good
heat and impact resistance)

IT Epoxy resins, uses

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)

(aromatic, epoxy resin casting compns. containing imidazole curing agents

and

powdered metals and optionally inorg. fillers with good heat and impact
resistance)

IT Impact-resistant materials

(heat-resistant, epoxy resin casting compns. containing imidazole curing
agents and powdered metals and optionally inorg. fillers with good heat
and impact resistance)

IT Heat-resistant materials

(impact-resistant, epoxy resin casting compns. containing imidazole curing
agents and powdered metals and optionally inorg. fillers with good heat
and impact resistance)

IT 23996-25-0 23996-55-6

RL: MOA (Modifier or additive use); USES (Uses)

(curing agent; epoxy resin casting compns. containing imidazole curing
agents and powdered metals and optionally inorg. fillers with good heat
and impact resistance)

IT 123-30-8DP, p-Aminophenol, triglycidyl derivs., polymers

25915-79-1DP, 4-Aminocresol, triglycidyl derivs., polymer with
tetraglycidylxylenediamine 65992-66-7DP, polymer with
4-aminocresol triglycidyl derivs. 91835-59-5DP, polymer with
4-aminocresol triglycidyl derivs.

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)

(epoxy resin casting compns. containing imidazole curing agents and powdered
metals and optionally inorg. fillers with good heat and impact
resistance)

IT 1344-28-1, Alumina, uses 7429-90-5, Aluminum, uses

RL: MOA (Modifier or additive use); USES (Uses)

(powdered; epoxy resin casting compns. containing imidazole curing agents

and

powdered metals and optionally inorg. fillers with good heat and impact
resistance)

L30 ANSWER 13 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1995:169556 HCAPLUS

DN 122:108182

TI Steering wheels manufactured from vinyl chloride polymers

IN Yamada, Tetsuya; Koga, Shigehiro; Imai, Kazuyoshi; Inaba, Kazuo

PA Chisso Corp, Japan; Nihon Plast Co Ltd

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06207067	A	19940726	JP 1991-131856	19910507
	JP 06102427	B	19941214		
PRAI	JP 1991-131856		19910507		

AB Light-weight steering wheels with good abrasion resistance, and matte surface, and no exfoliation between a metal core and a **polymer** coating layer are manufactured by covering core materials with coating layers from compns. containing (A) 100 parts vinyl chloride **copolymers** [from 97.0-99.95% vinyl chloride and 0.05-3.0% polyethylene glycol di(meth)acrylate [ethylene glycol **polymerization** unit number (EG) 2-50]], (B) 5-100 parts hollow fine particles (sp. gr. 0.15-0.8; particle size 5-300 μ m; compression strength ≥ 70 kg/cm²), (C) 1-20 parts poly(vinyl acetate) (I; average d.p. 100-1500), and (D) 30-150 parts plasticizers and forming skin layers in inner and outer layers of the coating layers. Thus, a steering wheel manufactured from a composition containing vinyl chloride **copolymer** [from 99.0% vinyl chloride and 1.0% polyethylene glycol diacrylate (EG = 14)] 100, DOP 100, **aluminum** silicate-based hollow fine particles (sp. gr. 0.7; average particle size 130 μ m; compression strength 70 kg/cm²) 25, I (S-Nyl 9902, average d.p. 200) 5, Ba-Zn-based stabilizers 2.5, epoxidized soybean oil 3, and carbon black 2 parts showed sp. gr. 1.10, good abrasion resistance, matte surface, and no exfoliation.

IC ICM C08L027-06

ICS C08K007-22

ICA B62D001-04; C08F299-02

ICI C08L027-06, C08L031-04

CC 38-3 (Plastics Fabrication and Uses)

ST steering wheel vinyl chloride **copolymer**; polyvinyl acetate blend steering wheel; hollow particle blend steering wheel; plasticizer vinyl chloride **copolymer** blend; polyoxyethylene acrylate **copolymer** steering wheel; alumina silicate filler steering wheel

IT Plasticizers

(light-weight steering wheels based on vinyl chloride **copolymer** compns. with good abrasion resistance and matte surface)

IT Wheels

(steering, light-weight steering wheels based on vinyl chloride **copolymer** compns. with good abrasion resistance and matte surface)

IT 1335-30-4

RL: MOA (Modifier or additive use); USES (Uses)

(hollow fine particles, filler; light-weight steering wheels based on vinyl chloride **copolymer** compns. with good abrasion resistance and matte surface)

IT 9003-20-7, Poly(vinyl acetate) 57137-16-3, Polyethylene glycol

dimethacrylate-vinyl chloride **copolymer** 79900-43-9,Polyethylene glycol diacrylate-vinyl chloride **copolymer**

RL: DEV (Device component use); POF (Polymer in formulation); PRP (Properties); USES (Uses)

(light-weight steering wheels based on vinyl chloride **copolymer** compns. with good abrasion resistance and matte surface)

IT 117-81-7, DOP

RL: MOA (Modifier or additive use); USES (Uses)

(plasticizer; light-weight steering wheels based on vinyl chloride **copolymer** compns. with good abrasion resistance and matte

surface)

L30 ANSWER 14 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:540564 HCAPLUS

DN 119:140564

TI Polyoxyphenylene-aromatic vinyl compound **polymer** compositions

IN Kobayashi, Toshiaki; Akatani, Shinichi; Hatake, Kotaro

PA Nippon Zeon Co, Japan; Zeon Kasei Kk; Oputesu Kk

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05086283	A	19930406	JP 1991-277212	19910927
PRAI	JP 1991-277212		19910927		

AB The title compns., showing good thermal conductivity and heat resistance, comprise polyoxyphenylenes, vinylarene **polymers**, powdered metal and/or metal oxides with thermal conductivity ≥ 0.05 cal/cm.s. $^{\circ}$ C at 20 $^{\circ}$ and average particle size 0.1-300 μ m, and, optionally, fluoropolymers, siloxanes, polyolefins, and/or graphite for improved sliding properties. A blend of poly(2,6-xylenol) 40, high-impact polystyrene 60, and atomized Al (average diameter 25-30 μ m, thermal conductivity 0.497 cal/cm.s. $^{\circ}$ C) 250 parts showed thermal conductivity $2.1 + 10^{-3}$ cal/cm.s. $^{\circ}$ C, heat distortion temperature 115 $^{\circ}$, Izod impact strength 7.5 kg.cm/cm, and kinetic friction coefficient 0.62. Adding 10 parts Lublon L 5 reduced the kinetic friction coefficient to 0.38 and coating of the **Al particles** with 3-(2-aminoethylamino)propyltrimethoxysilane increased the impact strength to 12.0 kg.cm/cm while thermal conductivity and heat distortion temperature remained practically unchanged.

IC ICM C08L071-12

ICS C08K003-08; C08K003-22; C08L025-04

CC 37-6 (Plastics Manufacture and Processing)

ST polyoxyphenylene polystyrene metal thermal cond; metal powder **polymer** thermal cond; aluminum powder **polymer** thermal cond; fluoropolymer lubricant polyoxyphenylene polystyrene blend; siloxane lubricant polyoxyphenylene polystyrene blend; polyolefin lubricant polyoxyphenylene polystyrene blend; graphite lubricant polyoxyphenylene polystyrene blend; silane coupling metal powder **polymer**; impact resistance polyoxyphenylene polystyrene metal

IT Siloxanes and Silicones, uses

RL: USES (Uses)

(lubricants, blends of polyoxyphenylenes and vinylarene **polymers** containing)

IT Fluoropolymers

RL: USES (Uses)

(lubricants, polyoxyphenylene-vinylarene **polymer** blends containing, thermally conductive)

IT Thermal conductors

(polyoxyphenylene-vinylarene **polymer** blends containing metals and metal oxides)

IT Impact-resistant materials

Plastics, molded

RL: USES (Uses)

(polyoxyphenylene-vinylarene **polymer** blends, filler-containing, thermally conductive)

IT Metals, uses

RL: USES (Uses)

(powdered, polyoxyphenylene-vinylarene polymer blends containing, thermally conductive)

IT Polyoxyphenylenes
RL: USES (Uses)
(polymers, blends with vinylarene polymers, powdered aluminum-containing, thermally conductive)

IT 100-42-5D, Styrene, polymers
RL: USES (Uses)
(blends with polyoxyphenylenes, powdered metal-containing, thermally conductive)

IT 24938-67-8, Poly[oxy(2,6-dimethyl-1,4-phenylene)] 25134-01-4, Poly(2,6-xilenol)
RL: USES (Uses)
(blends with vinylarene polymers, powdered aluminum-containing, thermally conductive)

IT 1760-24-3, γ -(2-Aminoethyl)aminopropyltrimethoxysilane
RL: USES (Uses)
(coupling agents, for powdered aluminum in polyoxyphenylene-vinylarene polymer blends)

IT 9002-88-4, Polyethylene
RL: USES (Uses)
(high-d., lubricants, polyoxyphenylene-vinylarene polymer blends containing)

IT 7782-42-5, Graphite, uses
RL: USES (Uses)
(lubricants, polyoxyphenylene-vinylarene polymer blends containing)

IT 9002-84-0, Poly(tetrafluoroethylene)
RL: USES (Uses)
(lubricants, polyoxyphenylene-vinylarene polymer blends containing, thermally conductive)

IT 1309-48-4, Magnesium oxide, uses 7429-90-5, Aluminum, uses 7440-50-8, Copper, uses 12597-71-6, Brass, uses
RL: USES (Uses)
(powdered, polyoxyphenylene-vinylarene polymer blends containing, thermally conductive)

L30 ANSWER 15 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
AN 1992:614145 HCAPLUS
DN 117:214145
TI Preparation of ceramic shells as casting molds
IN Ballewski, Heinrich; Graf, Herbert; Grossmann, Wolfgang
PA Thyssen Industrie A.-G., Germany
SO Ger. Offen., 8 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4116609	A1	19920723	DE 1991-4116609	19910522
	DE 4116609	C2	19930826		
	CA 2098494	A1	19920720	CA 1991-2098494	19910628
	WO 9212813	A1	19920806	WO 1991-EP1217	19910628
	W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU, US				
	RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GN, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG				
	AU 9180735	A	19920827	AU 1991-80735	19910628
	EP 567454	A1	19931103	EP 1991-912048	19910628

EP 567454 B1 19941102
 R: BE, DE, ES, FR, GB, NL, SE
 BR 9107285 A 19940614 BR 1991-7285 19910628
 ES 2066452 T3 19950301 ES 1991-912048 19910628
 ZA 9108353 A 19930413 ZA 1991-8353 19911018
 PRAI DE 1991-4101501 A1 19910119
 DE 1991-4116609 A 19910522
 WO 1991-EP1217 A 19910628
 AB The title molds, which dry rapidly and are permeable to moisture but not water, are prepared by dipping patterns in slurries of fire-resistant materials and binders (aqueous dispersions of colloidal SiO₂ and high polymers and/or organic Si compds.), sprinkling coarse, fire-resistant powders on this coating, drying, and repeating the steps as required. A mold prepared as above, using a dipping slurry containing 94 kg binder (56 L 30% aqueous colloidal SiO₂, 13 L H₂O, 13 L high polymer dispersion) and 132 kg filler [fused SiO₂ 59.5, mullite 59.5, and ZrO₂ 13 kg (particle size <350, 150, and 350 mesh, resp.)] and sprinkling with Al silicate (particle size 0.3-0.5 mm) and 50:50 Al silicate-mullite had green, fired, and fired and post-dipped strength 349, 309, and 400 N/cm², resp.
 IC ICM B22C001-16
 ICS B22C001-08; C08K003-34; C08K005-54; B22C009-00; B28B011-04; C04B035-68; C04B041-81
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 57
 ST ceramic shell casting mold; polymer binder casting mold; silica binder casting mold; mullite filler casting mold; zirconia filler casting mold
 IT Binding materials
 (aqueous polymers and silica sols, in ceramic shell mold manufacture)
 IT Polymers, uses
 RL: USES (Uses)
 (binders, in ceramic shell mold manufacture)
 IT Molds (forms)
 (ceramic shells, aqueous polymer binders for manufacture of moisture-permeable)
 IT Ceramic materials and wares
 (molds, shell, for casting, aqueous polymer binders for manufacture of)
 IT 1302-93-8, Mullite 1314-23-4, Zirconium dioxide, uses 1335-30-4
 7631-86-9, Silica, uses
 RL: USES (Uses)
 (casting molds, aqueous polymer binders for)
 L30 ANSWER 16 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1989:575510 HCAPLUS
 DN 111:175510
 TI Lightweight scratch-resistant crystalline propylene polymer blend moldings
 IN Motoyama, Morihisa; Murakami, Tsutanori; Umemura, Suguru
 PA Showa Denko K. K., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1
 PATENT NO. KIND DATE APPLICATION NO. DATE

 PI JP 01104637 A 19890421 JP 1987-261626 19871019
 PRAI JP 1987-261626 19871019

AB Title compns., giving products with good appearance and no sink marks, comprise (a) crystalline propylene polymers with melt flow index (MFI) 0.01-100 g/10 min, (b) Al₂O₃-SiO₂ hollow particles with average size 5-400 µm and d. 0.70-1.00 g/cm³, and (c) propylene polymers treated with 0.01-10 parts unsatd. carboxylic acids or anhydrides and 0.01-10 parts organic peroxides, such that $b/(a + b + c) = (3-50)/100$ and $c/b = (7-75)/100$. Thus, 100 parts polypropylene (MFI 0.6 g/10 min) was treated with 0.60 part maleic anhydride and 0.4 part Bz₂O₂ to give modified polymer, 10 parts of which was kneaded with 70 parts 15:85 ethylene-propylene block copolymer (MFI 10 g/10 min) and 20 parts Al₂O₃-SiO₂ hollow particles (average size 57 µm, d. 0.75 g/cm³), pelletized, and injection molded to give a test piece showing flexural modulus 21,400 kg/cm² and pencil hardness H, vs. 22,800 and 3B, resp., for a test piece containing talc instead of the hollow particles.

IC ICM C08L023-10

ICS C08K007-22

ICI C08L023-10, C08L023-26

CC 37-6 (Plastics Manufacture and Processing)

ST propylene polymer blend scratch resistance; cryst propylene polymer blend lightwt; silica alumina microballoon filler polypropylene; maleated polypropylene blend

IT Lightweight materials

Plastics, molded

RL: USES (Uses)

(propylene polymer-carboxylated polypropylene blends, containing alumina-silica microballoons, lightwt. ant scratch-resistant)

IT 9003-07-0, Polypropylene 9010-79-1, Ethylene-propylene copolymer 106565-43-9, Ethylene-propylene block copolymer

RL: USES (Uses)

(carboxylated polypropylene blends, containing alumina-silica microballoons, lightwt. and scratch-resistant)

IT 108-31-6D, Maleic anhydride, reaction products with polypropylene 9003-07-0D, Polypropylene, maleated

RL: USES (Uses)

(crystalline propylene polymer blends, containing alumina-silica microballoons, lightwt. and scratch-resistant)

IT 1335-30-4, Aluminum silicon oxide

RL: USES (Uses)

(hollow particles, propylene polymer blends containing, lightwt. and scratch-resistant)

L30 ANSWER 17 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1989:96750 HCAPLUS

DN 110:96750

TI Silver looking laminated safety glass and method of its production

IN Sipek, Karel; Kubes, Ladislav; Jelinek, Otto; Sladeczek, Antonin

PA Czech.

SO Czech., 7 pp.

CODEN: CZXXA9

DT Patent

LA Czech

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 247926	B1	19870115	CS 1985-1769	19850314
PRAI	CS 1985-1769		19850314		
AB	Nontransparent laminated safety glass with the metallic appearance for				

construction purposes is made from 2 sheet glass bound with a film containing poly(vinyl butyral) (I) with 15-30% vinyl alc. units 45-75, plasticizer 15-45, UV-light absorber and/or antioxidant 0.2-1.0, powdered metal, alloy, or metal compound (with particle size 0.01-200 μm) 0.1-30 and/or nacreous pigment 0.01-20, and, optionally, adhesion regulators 0.5-10 and other pigments 0.01-5% prepressed by rollers or vacuum at 40-130° and pressed at 130-180° and 1-2 MPa for 0.5-2 h. Thus, 2 6-mm-thick pieces of glass were laminated with a 0.8-mm film from I (18.2% alc.) 63.2, dihexyl adipate 27.0, powdered Al (particles 0.1 μm) 0.5, powdered Al (particles 150 μm) 2.0, silver nacreous pigment 5.0, golden nacreous pigment 2.0, and benzotriazole UV stabilizer 0.3%, prepressed between rubber rollers at glass-surface and film-glass interface temps. 103-110 and 96-101°, resp., and 30 N/mm, and pressed in an air autoclave at 1.5 MPa and 155° for 60 min, giving a laminate with adhesion 5-7.5° (Pummel test).

IC ICM C03C027-12

ICS B32B017-06

CC 38-3 (Plastics Fabrication and Uses)

Section cross-reference(s): 57

ST polyvinyl butyral laminate glass safety; aluminum powd metallic glass laminate; nacreous pigment metallic glass laminate; plasticizer ester metallic glass laminate

IT Esters, uses and miscellaneous

RL: MOA (Modifier or additive use); USES (Uses)
(plasticizers, for silver safety glass)

IT Adhesives

(poly(vinyl butyrals), containing aluminum and nacreous pigments, for silver safety glass laminate)

IT Pearly substances

(powdered, vinyl acetal polymer adhesive containing, for lamination of safety glass with silver appearance)

IT Vinyl acetal polymers

RL: USES (Uses)

(butyrals, adhesive, containing aluminum and nacreous pigments, for silver safety glass laminate)

IT Glass, oxide

RL: USES (Uses)

(safety, vinyl butyral laminate, containing aluminum powder and pearly substances, with silver appearance)

IT 95-08-9 110-33-8, Dihexyladipate 119096-70-7

RL: MOA (Modifier or additive use); USES (Uses)

(plasticizer, for silver safety glass laminates)

IT 7429-90-5, Aluminum, uses and miscellaneous

RL: USES (Uses)

(powdered, vinyl acetal polymer adhesive containing, for lamination of safety glass with silver appearance)

L30 ANSWER 18 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1987:460039 HCAPLUS

DN 107:60039

TI Thermosetting polyester molding compositions

IN Sugiyama, Hirokore

PA Matsushita Electric Industrial Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI	JP 62007759	A	19870114	JP 1985-147513	19850704
	JP 07023447	B	19950315		
PRAI	JP 1985-147513		19850704		

AB Compns. useful in preparing artificial marble comprise 100 parts of a mixture containing a polyester (number-average mol. weight 800-3200) (R1O)nR [each R1 = (meth)acryloyl, n = 0-8, R = residue of polyester with aromatic polycarboxylic acid and/or diphenol in the main chain] 25-65, vinyl monomer 30-70, and styrene polymer 2-15% and 60-360 parts Al(OH)3, as well as a small amount of a hardener. Thus, a mixture of a 50% solution of 6:4:6:6:20:6 (mol) acrylic acid-diethylene glycol-isophthalic acid-maleic anhydride-propylene glycol-terephthalic acid condensate in styrene 93, polystyrene 7, Bz2O2 1, Zn stearate 3, glass fibers (6 mm strand) 4, and Al(OH)3 (average particle size 50 μ) 240 parts was molded with mold shrinkage 0.5% to give a noncracking, transparent molding with flexural strength 1020 kg/cm².

IC ICM C08L067-06

ICS C08K003-22

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 58

ST polyester aluminum hydroxide artificial marble; transparency polyester artificial marble; flexural strength polyester artificial marble

IT Stone, artificial

RL: USES (Uses)

(marblelike, polyesters containing aluminum hydroxide and polystyrene as)

IT Polyesters, uses and miscellaneous

RL: USES (Uses)

(unsatd., aluminum hydroxide-filled, for artificial marble)

IT 109464-54-2 109492-18-4

RL: USES (Uses)

(aluminum hydroxide-filled, for artificial marble)

IT 9003-53-6

RL: PRP (Properties)

(unsatd. polyester blends, containing aluminum hydroxide, for artificial marble)

L30 ANSWER 19 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1986:628012 HCAPLUS

DN 105:228012

TI Thermal-conductive polypropylene compositions

IN Saito, Nobuo

PA Dainichiseika Color and Chemicals Mfg. Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61181846	A	19860814	JP 1985-20068	19850206
PRAI	JP 1985-20068		19850206		

AB Compns. containing .apprx.50-85% α -crystal form Al oxide with particle size 0.1-300 μ have good corrosion- and heat-resistant properties and are useful in preparing automobile radiators, industrial heat-exchangers, wastewater treatment coolers, etc. Thus, a mixture of 30 parts polypropylene (Noblen BC-5) and 70 parts Al oxide (A-12) was injection molded to give a board having good thermal conductivity, heat distortion temperature 152°, and good corrosion resistance.

IC ICM C08L023-12

ICS C08K003-22
 CC 37-6 (Plastics Manufacture and Processing)
 ST polypropylene alumina blend thermal conductor; corrosion
 resistance polypropylene thermal conductor; heat resistance
 polypropylene thermal conductor
 IT Heat-exchange apparatus
 (polypropylene-aluminum oxide blends for)
 IT Thermal conductors
 (polypropylene-aluminum oxide blends, corrosion- and
 heat-resistant, for automobile radiators and heat exchangers)
 IT Heat-resistant materials
 (polypropylene-aluminum oxide blends, thermal-conductive, for
 automobile radiators and heat exchangers)
 IT 1344-28-1, uses and miscellaneous
 RL: USES (Uses)
 (polypropylene containing, for thermal conductors, corrosion- and
 heat-resistant)
 IT 9003-07-0
 RL: USES (Uses)
 (thermal conductors, containing aluminum oxide, corrosion- and
 heat-resistant)

L30 ANSWER 20 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1986:554126 HCAPLUS
 DN 105:154126
 TI Soft poly(vinyl chloride) compositions
 IN Yamada, Tetsuya; Shudo, Kazumichi; Koga, Shigehiro
 PA Chisso Corp., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 61066737	A	19860405	JP 1984-190377	19840911
PRAI	JP 1984-190377		19840911		

AB Compns. containing vinyl chloride resins (d.p. 400-4000) 100, microhollow
 particles (d. 0.15-0.78, compressive strength >60 kg/cm2, particle
 size 5-300 μ) 5-100, 0.3-10:10-30:60-90 maleic
 anhydride-vinyl acetate-vinyl chloride copolymer (I) 1-20, and
 plasticizers 30-150 parts have good surface and processability and are
 useful in preparing automobile parts. Thus, a mixture of PVC 100, DOP 100,
 Ba-Zn stabilizer 2.5, epoxidized soybean oil 3, aluminum
 silicate microhollow particles (d. 0.6, compressive strength 70
 kg/cm2, average particle size 75 μ) 20, and 5:25:70 I 5 parts was injection
 molded to give a 10-mm sheet having d. 107, hollow particle retention
 98.8%, a good surface, and a good skin-layer formation, vs. 1.09, 81.2,
 coarse, and good, resp., for a sheet containing vinyl acetate-vinyl chloride
 copolymer instead of I.

IC ICM C08L027-06
 ICS C08K007-22
 CC 37-6 (Plastics Manufacture and Processing)
 ST PVC hollow particle blend; maleic anhydride copolymer PVC blend;
 vinyl acetate copolymer PVC blend; aluminosilicate hollow
 particle PVC blend
 IT Glass, oxide
 RL: USES (Uses)
 (borosilicate, microhollow particles, fillers, for PVC containing maleic
 anhydride-vinyl acetate-vinyl chloride copolymer and

plasticizers, for smooth-surfaced moldings)

IT Aluminosilicates, uses and miscellaneous
Epoxy resins, uses and miscellaneous
Inorganic compounds
RL: USES (Uses)
(microhollow particles, fillers, for PVC containing maleic anhydride-vinyl acetate-vinyl chloride copolymer and plasticizers, for smooth-surfaced moldings)

IT Polymerization
(graft, of vinyl chloride on rubber, for moldings)

IT 25085-82-9
RL: USES (Uses)
(PVC-aluminosilicate microhollow particle-plasticizer blends, for smooth-surfaced moldings)

IT 9002-86-2
RL: USES (Uses)
(aluminosilicate microhollow particle-maleic anhydride-vinyl acetate-vinyl chloride copolymer-plasticizer blends, for smooth-surfaced moldings)

IT 26337-23-5
RL: USES (Uses)
(graft, micro particle-vinyl chloride terpolymer-plasticizer blends, for smooth-surfaced moldings)

IT 25897-68-1
RL: USES (Uses)
(graft, microhollow particle-vinyl chloride terpolymer-plasticizer blends, for smooth-surfaced moldings)

IT 9003-22-9 25035-97-6 25035-98-7 25037-78-9 25085-46-5 25119-90-8
25134-83-2 25214-53-3 25300-62-3 25702-34-5 25820-80-8
25822-14-4 26007-02-3 30139-94-7 57137-16-3 60690-20-2
79900-43-9
RL: USES (Uses)
(microhollow particle-vinyl chloride terpolymer-plasticizer blends, for smooth-surfaced moldings)

IT 1343-88-0
RL: USES (Uses)
(microhollow particles, fillers, for PVC containing maleic anhydride-vinyl acetate-vinyl chloride copolymer and plasticizers, for smooth-surfaced moldings)

IT 117-81-7
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizers, for PVC containing aluminosilicate microhollow particles and maleic anhydride-vinyl acetate-vinyl chloride copolymer, for smooth surfaced moldings)

L30 ANSWER 21 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
AN 1984:211018 HCAPLUS
DN 100:211018
TI Low-shrinkage unsaturated polyester resin compositions
PA Mitsubishi Petrochemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF

DT Patent
LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58173114	A	19831012	JP 1982-56856	19820406
PRAI	JP 1982-56856		19820406		
AB	The title compns. contain 100 parts unsatd. polyester and ethylenically				

unsatd. monomer (i.e., styrene optionally containing other monomers), 1-25 parts thermoplastic resin soluble in the ethylenically unsatd. monomers, 0.05-5% (based on inorg. filler weight) silane coupling agent, 400 parts inorg. filler of particle size 0.1-100 μ , and a polymerization catalyst. Thus, a mixture of styrene 100, $\text{Al}(\text{OH})_3$ (particle size 17 μ) 250, Bz_2O_2 0.3, tert-BuOOBz 0.2, and poly(vinylpyrrolidinone) [9003-39-8] 0.6 part was heated with Bu_2Sn dilaurate and $\text{PhSi}(\text{OMe})_3$ [2996-92-1] [0.1 and 1.0%, resp., based on $\text{Al}(\text{OH})_3$ weight] to give polymer granules. Then 30 parts of the granules were combined with maleic anhydride-propylene glycol copolymer [25749-49-9] 35, styrene 35, tert-BuOOBz 1, Zn stearate 3, CaCO_3 100, red colorant 5, MgO 1, and 0.5-in. glass fibers 70 parts to provide a molding composition

IC C08F299-04; C08K005-54; C08K007-16; C08L067-06

CC 37-6 (Plastics Manufacture and Processing)

ST polyester unsatd molding compn; silane polyester molding compn; polyvinylpyrrolidinone polyester molding compn; maleic anhydride copolyester molding compn; propylene glycol copolyester molding compn; shrinkage resistance polyester molding compn

IT Coupling agents

(silanes, for unsatd. low-shrinkage polyester molding compns.)

IT Polyesters, uses and miscellaneous

RL: USES (Uses)

(unsatd., molding compns., low-shrinkage)

IT 78-08-0 2530-85-0 2996-92-1 4130-08-9

RL: USES (Uses)

(coupling agents, for unsatd. polyester low-shrinkage molding compns.)

IT 25749-49-9 27083-66-5

RL: USES (Uses)

(molding compns. containing, low-shrinkage)

IT 9003-20-7D, derivs. 9003-39-8 9003-53-6 9011-14-7 24980-58-3

RL: USES (Uses)

(unsatd. polyester molding compns. containing, low-shrinkage)

L30 ANSWER 22 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1983:199201 HCAPLUS

DN 98:199201

TI Alkylation of phenols by low-molecular-weight polymers or copolymers of α -olefins

IN Pac, Jiri; Sedlar, Jiri; Svejnova, Ema; Uhlir, Milos; Holcik, Jan; Karvas, Milan; Collak, Mikulas; Magura, Miroslav

PA Czech.

SO Czech., 4 pp.

CODEN: CZXXA9

DT Patent

LA Czech

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CS 200055	B1	19800829	CS 1978-3107	19780515
PRAI	CS 1978-3107	A	19780515		

AB To prepare light or colorless alkylation products of phenols with polymers and copolymers of C2-4 α -olefins of d.p. 10-20, the alkylation catalyst based on bleaching earth impregnated with 5-35% polyphosphoric acids $\text{Hn}+2\text{PnO}_3\text{n}+1$ (I; $n = 2-6$) was mixed with 1-30% powdered Mg, Zn, or Al. The products were suitable as polymer stabilizers and additives for fuels and mineral oils. Thus, polypropylene oil (average mol. weight 480-550) 200, 2,6-Me₂C₆H₃OH (II) 50, PhMe 200, powdered Al (particle size .apprx.15 μ) 10, and a catalyst from I (81.5% P₂O₅) 10,

bleaching earth 30, and H₂O 4 parts were refluxed 7.5 h, giving 40% of alkylated II with Gardner color 2, whereas a product prepared without Al had Gardner color 9.

IC C07C039-06
 CC 37-4 (Plastics Manufacture and Processing)
 Section cross-reference(s): 25
 ST phenol alkylation polyolefin; xylenol **polypropylene** alkylation; polyphosphoric acid aluminum alkylation catalyst; bleaching earth alkylation catalyst
 IT Polyphosphoric acids
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, containing decoloring clays and powdered metals, for alkylation of phenols with oligomeric polyolefins)
 IT Decolorizing agents
 (clays, catalysts, containing polyphosphoric acids and powdered metals, for alkylation of phenols with oligomeric polyolefins)
 IT Alkylation catalysts
 (decolorizing clays containing polyphosphoric acids and powdered metals, for phenols by oligomeric polyolefins)
 IT 7429-90-5, uses and miscellaneous 7439-95-4, uses and miscellaneous
 7440-66-6, uses and miscellaneous
 RL: CAT (Catalyst use); USES (Uses)
 (catalysts, containing polyphosphoric acids, for alkylation of phenols with oligomeric polyolefins)
 IT 95-48-7DP, reaction products with **polypropylene** 576-26-1DP,
 reaction products with **polypropylene** 9003-07-ODP,
 reaction products with phenols
 RL: PREP (Preparation)
 (manufacture of, alkylation catalysts for)

L30 ANSWER 23 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1975:461028 HCAPLUS

DN 83:61028

TI Acrylic paper substitutes

IN Murayama, Naohiro; Esaka, Akira; Fukuda, Makato; Suzuki, Shiro

PA Kureha Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50020075	A	19750303	JP 1973-74977	19730703
	JP 53038352	B	19781014		
PRAI	JP 1973-74977	A	19730703		

AB Pressing a mixture containing an acrylonitrile-acrylate **copolymer** 100, a powdered inorg. material (average particle size 1-200.mu.) 110-850, and a finishing assistant 5-100 parts, drawing the sheets formed at or above 5 draw ratio and below the m.p. of the **polymer** in the machine direction, and redrawing the resulting sheets in the transverse direction at below the 1st drawing temperature but above room temperature

gives sheets with a network structure. Thus, a mixture of 100 parts 75:25 acrylonitrile-methyl acrylate **copolymer** (I) [24968-79-4] and 150 parts Al(OH)₃ [21645-51-2] (average particle size 5-7μ) was pressed to give a 0.2-mm sheet. The sheet formed was drawn 150% (area) in one direction at 50° and redrawn 500% at 90° in the machine direction. The resulting sheet was drawn 200% at 40°

in the transverse direction to give a $\leq 20\mu$ thick white cosmetic paper with good softness. The structure of a paper prepared from a similar composition containing a urethane polymer instead of I was nonuniform. CaCO_3 [471-34-1] and NaCl [7647-14-5], were also used.

INCL 47F2; 47E0; 42G0; 25(1)C172
 CC 37-3 (Plastics Fabrication and Uses)
 ST acrylic paper substitute; softness acrylic paper substitute; cosmetic paper acrylic polymer; metal salt paper substitute
 IT Paper substitutes
 (acrylic polymer containing metal salts, with improved softness)
 IT 471-34-1, uses and miscellaneous 7647-14-5, uses and miscellaneous 21645-51-2
 RL: USES (Uses)
 (acrylic paper substitutes containing, with improved softness)
 IT 24968-79-4
 RL: USES (Uses)
 (paper substitutes, with improved softness)

L30 ANSWER 24 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1975:171990 HCAPLUS
 DN 82:171990
 TI Nonburning lightweight composites
 IN Kato, Chuzo; Kami, Kuniaki; Matsushima, Kinji; Hirkawa, Matsuo
 PA Dai Nippon Printing Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 50003451	A	19750114	JP 1973-53656	19730516
	JP 56038550	B	19810907		
PRAI	JP 1973-53656	A	19730516		

AB Mixts. of 2-13 parts (as solids) organic binders consisting of urea resins, melamine resins, phenolic resins, and/or their cocondensates and 87-98 parts inorg. substances were press-molded to give the title composites. Thus, $\text{Al}(\text{OH})_3$ [21645-51-2] (average particle size $40-60\mu$, bulk sp. gr. 1.1) 5, shirasu microballoons (average particle size $250-500\mu$ and bulk sp. gr. 0.15-0.2) 5, and water-soluble formaldehyde-melamine-urea polymer [25036-13-9] (61.4% nonvolatiles, 1.6 P viscosity at 25° , and 0.41% free HCHO) 0.86 kg were kneaded 5 min and press-molded 10 min at 150° and 75 kg/cm^2 to give a composite with bulk sp. gr. 0.8.

INCL 25(1)D22
 CC 36-6 (Plastics Manufacture and Processing)
 ST shirasu microsphere composite; phenolic shirasu microsphere composite; urea melamine resin composite; aluminum hydroxide fireproof composite; fireproof shirasu microsphere composite; amino resin shirasu composite
 IT Fire-resistant materials
 (amino resin-shirasu microballoons-aluminum hydroxide composite moldings, lightwt.)
 IT Phenolic resins
 RL: USES (Uses)
 (bindings, for fireproof composite moldings containing shirasu microballoons)
 IT Shirasu
 RL: USES (Uses)
 (microspheres, fireproof amino and phenolic resin composites containing)
 IT 25036-13-9

RL: USES (Uses)

(binders, for fireproof composite moldings containing shirasu microballoons and aluminum hydroxide)

IT 21645-51-2

RL: USES (Uses)

(fireproof amino resin moldings containing shirasu microballoons and)

L30 ANSWER 25 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1972:47944 HCAPLUS

DN 76:47944

TI Solid propellant employing a polymer containing a carboranyl group

IN Green, Joseph

PA Thiokol Chemical Corp.

SO U.S., 4 pp.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3627596	A	19711214	US 1967-634021	19670412

PRAI	US 1967-634021	A	19670412		
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AB Solid fuel propellants with high burning rates were prepared by incorporating an adipic acid-bis(hydroxymethyl)-carborane copolymer (I) in the NH₄ClO₄ oxidizer. For example, NH₄ClO₄ (particle size 300-800 μ), Al powder (particle size 40 μ), I, lecithin, castor oil, butanediol, ferric acetylacetonate, and Kosmos carbon black were mixed, cast, and 16 hr cured at 150°. The resulting propellant had 1.33 in./sec burning rate at 500 psi. Measured burning rates were 3-10 times those of conventional propellants.

IC C06D

INCL 149019000

CC 50 (Propellants and Explosives)

Section cross-reference(s): 37

ST carborane copolymer propellant; adipic acid copolymer; solid propellant fuel

IT Propellants

(adipic acid-bis(hydroxymethyl)carborane polymers for ammonium perchlorate)

IT 29567-61-1

RL: USES (Uses)

(for ammonium perchlorate propellants)

L30 ANSWER 26 OF 26 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1964:81374 HCAPLUS

DN 60:81374

OREF 60:14219c-d

TI Aluminum nitride refractory bodies

PA Norton Co.

SO 3 pp.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 952553		19640318	GB 1962-25602	19620704
	DE 1188052			DE	
	US 3194635		19650713	US 1961-124789	19610718

PRAI US

19610718

AB Powdered Al having about 200-mesh particle size, mixed with .apprx.5-10% equally fine C by weight, as graphite, lampblack, or coke, is heated in Ar at 2050-2150° to stabilize the AlN against decomposition by H₂O. The product can then be hot pressed, or pressed cold and sintered, to form refractory ware, either with or without the addition of borides or carbides. The C is necessary to deoxidize the powdered Al, but should not exceed 20% by weight Nitrides so produced contained

Al 60-70, N 23-28, and free C 0.75-5.6% by weight Brit. 952,554 (Cl. B 23n, C 22c); 3 pp. Bodies composed of 3-95% AlN thus produced, with the balance SiC or B₄C, were hot-pressed at 3000 lb./in.² and 1950-2250° to 2.7-3.2 g./cc., or 93-100% of theoretical d. The AlN should be at least 70% pure. As little as 3% lowered the required hot pressing temperature 200°. The nitride-carbide mixts. were prepared by dry milling 16 hrs. in a B₄C mill with WC balls, and no binder is mentioned.

IC C01B

CC 20 (Nonferrous Metals and Alloys)

IT Refractories

(aluminum nitride)

IT 409-21-2, Silicon carbide 12069-32-8, Boron carbide, B₄C

(aluminum nitride refractories containing)

IT 24304-00-5P, Aluminum nitride, AlN

RL: PREP (Preparation)

(manufacture of, and refractory manufacture therefrom)

IT 11130-49-7, Chromium carbide 12070-08-5, Titanium carbide

(refractories from AlN and)

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